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ESSAYS, MONOGRAPHS, AND CASES.

"*The Elliptical Artificial Tympanum.*" By J. HENRY CLARK, M.D.

If the sequelæ of the exanthematica of childhood, especially in relation to the ear, were more carefully watched, and the subsequent otorrhœa treated *patiently* on rational principles, the artificial tympanum would less often prove a useful appliance. The majority of cases which have fallen under our observation, in which this instrument has proved of service, have been those of neglected otorrhœa. The eruptive diseases of childhood leave a trace nowhere so often as in the organ of hearing. This seems to be the case, frequently long after all constitutional effects have ceased to manifest themselves. The disease is local in its character, and requires *local* treatment. If these cases can be held under treatment a sufficient time, they can be cured with as much certainty as any other diseases, and oftener than many ailments for which we are called to prescribe. Among the improvident changing classes that seek relief at a charitable institution, treatment would, of course, be less successful than among those whose position is higher up in the scale of society. This disease produces little practical disability, and failing to excite disgust, it is permitted to proceed to the destruction of the membrana tympani, before atten

tion is fairly excited. If proper treatment fails of success, when perseveringly employed, it is generally because the patient could not be held to one course of treatment long enough to accomplish a cure. To change the condition of the meatus auditorius externus, which for years has secreted a loathsome purulent fluid, and discharged it from its interior mucous surface, and bring this canal to a healthy condition, producing only its proper legitimate secretions, often requires much time, and the careful, patient adaptation of local remedies, as well as due regard to the constitutional peculiarities of the patient.

On referring to our record, which includes patients of nearly every age, from a few months to full maturity, we conclude that if the patient is under ten years of age, six months may be named as the possible limit of the continuance of the disease. It is oftener cured in less time. If the patient is under fifteen, nine months may be named, with the expectation of effecting a cure in less time. If over fifteen, one year is the least period of time that it is safe to calculate upon, and if older, it may require years; but if patience does not fail, a cure may be promised as likely to result. As is true of all diseases, some cases, in the present state of our knowledge, are incurable, but they are believed to be very rare.

Two patients have just passed from under our treatment. The one was a young lady, aged twenty-four; the discharge had continued 19 years, ever since an attack of scarlatina, in childhood. It has required about fourteen months to effect a cure, but the cure is *complete*. In the other case—also that of a lady—the patient was 28 years of age. The disease in this case also commenced in childhood, at about five years of age. To effect a cure has required within three months of three years. Two lads have just ceased attendance, who have been cured within the period of four months. The disease had continued in these cases about nine years. Many cases might be referred to, where there was no constitutional complication, in which one or two months have been sufficient to effect a cure. These cases are cited to illustrate the proposition that with time and patience most cases are curable. If the ear received the same watchful care during an attack of scarlatina, and subsequently, a smaller number of children would be permanently deaf; and if the cases were followed up by the treatment of the anæmic condition that frequently ensues, fewer tympanums would be destroyed. The worst cases of scarlatina occur in scrofulous subjects, in which measures termed "anti-phlogistic" would be inadmissible. The prompt administration of tonics and anti-scrof-

ulous remedies, with due regard to the condition of the bowels, with counter-irritation behind the ears, will generally prevent mischief.

Some physicians discourage the treatment of the discharge after recovery from the eruptive diseases of childhood, and in this way induce fatal neglect. Parents are told that "the child will outgrow it, that it will get no worse, that it is dangerous to arrest the discharge, and are sometimes advised to stuff the meatus with cotton, and wait for time and improved health to do the rest. The truth is, those cases do *seldom improve without interference.* It is just as safe to arrest a discharge in this situation as in any other. It is dangerous, highly so, not to do it just as soon as it can be done in a proper, legitimate manner. It is dangerous to life, as well as the faculty of hearing, to permit the discharge to continue, while it is to the highest degree unpleasant and mortifying to a sensitive patient. If the discharge must continue, it is better, far better, not to put cotton in the ear. That hole was never designed to be stuffed. Cases could be cited which have recently come under our own observation, in which a cure was effected by simply removing the cotton and ordering its discontinuance. We have repeatedly obtained undeserved credit by removing an old pledget of cotton which for years had furnished mechanical obstruction to the due performance of the functions of the ear.

While a single generation of physicians sometimes get rid of chronic errors, it takes several ages to rid the community of erroneous doctrines once assiduously taught by the profession. It is high time that we began to teach new, truer, and safer doctrines in relation to the domestic treatment of the ear.

With regard to the treatment of these cases, unless produced by morbid growths, we rely upon astringents, and alteratives locally applied, with constitutional treatment, if required. It is frequently a mere local disease.

In a majority of cases of otorrhœa occurring in adults, the tympanum is ruptured or partially obliterated. When the disease is fully arrested the discharge wholly ceases, and the surface that has secreted a muco-purulent fluid furnishes wax. After the first stage of cure is passed—during which the hearing is impaired rather than improved, because the fluid afforded a medium for the transmission of sound to the internal ear—the artificial tympanum may be used often, with manifest advantage.

In 1842, a lady, who was a patient of "Yearsley," discovered that the presence of cotton-wool in the ear improved her hearing. That

gentleman carefully investigated the cause, and thus discovered the artificial tympanum. The great success of Yearsley's cotton plug induced Toynbee to prepare the rubber artificial drum, so long used and so well known to the profession. It is now evident that any substance made to occupy the place of a ruptured tympanum will improve the hearing. The moistened cotton of Yearsley even yet seems to us not applicable to some cases. Yearsley maintains that the cotton *cures* the discharge, and that it can be readily and pleasantly worn day and night. It is certain that all forms of rubber drums induce or promote discharge by causing irritation, and moreover they require to be removed at night. A rubber drum properly constructed is far more available, because it is readily adjusted. It is not by any means so easy—Yearsley to the contrary notwithstanding—to adjust that pledget of cotton. An artificial drum of any description must be adjusted by the patient himself, who is guided by the sense of hearing and the experience which he very soon acquires.

By the material aid of a very observing and intelligent patient we have introduced an artificial tympanum which we regard as better than Yearsley's cotton plug or Toynbee's drum. The material is the same as that employed in the manufacture of some which are found in the shops of Toynbee's pattern, but the form is wholly different. The form of Toynbee's drum is round, with a staff straight, or slightly inclined from perpendicular, while the one here described is egg-shaped or elliptical, with a staff nearly circular. The point of suspension is not, like that of Toynbee's drum, in the centre, but in one end, which causes it to assume the desired concavity of an ellipse. After being worn a short time it permanently assumes a concavo-convex form, the concavity looking inward, which greatly increases its effectiveness, and in shape seems as far as possible to supply the loss of the natural tympanum. The form and direction of the staff on which the drum is suspended is curved downward, adapting itself to the shape and form of the canal in such manner as to be insulated, and in no case to touch the sides of the canal. This diagram will show the shape of the drum alluded to, and the bend of the shaft.

The drum is elliptical in shape, about a half inch in length and three-eighths of an inch in breadth. It generally requires reduction. It may be cut to any size.

The staff is about seven-eighths of an inch in length, and is bent to the form here indicated. It terminates with no ring, the end of the staff being cut off. If a ring is made to facilitate its removal, it will come in contact with the lower and outer edge of the meatus auditorius externus, producing unpleasant vibrations whenever the head is suddenly moved, and confusing the patient. The drum should be so introduced that the wire curves downward. The directions for its introduction are so intelligently described in the experience of my patient, before alluded to, that I quote from one of his letters: "I moisten not only the drum, but the ear, with a pencil dipped in water or glycerine. If the canal be dry, I find it of great service to apply the wet brush to a cake of fine soap, and thus applying to the ear weak soap-suds. This seems to make the drum adhesive, and it retains better its position. My ear is so dry that merely wetting the drum will not answer. If any do not find benefit from the artificial tympanum, I believe it is often for the want of judgment with regard to their introduction into the ear. I find that great care is needed with regard to holding the wire. I find that the proper direction to be given the staff is to incline it *downward* and *inward*, holding it tightly between the thumb and fore-finger. I pass it down till I feel a gentle roar; I then press on gently with the fore-finger only till I hear sound break distinctly. I find it very important not to push the drum in *too far;* I find if I do this that I do not hear so well as when the drum is out; I find that repeated attempts are frequently necessary in order to get the drum properly adjusted; I find that it is frequently necessary to withdraw the drum entirely and take a fresh start, for I find it important to give it the proper direction on its first introduction." This is the experience of many patients into whose ears we have introduced the artificial drum, of the shape and form recommended. This gentleman thus concludes his letter, which I quote, as proving the usefulness of this contrivance in some cases: "I believe that any whose natural drum is ruptured can obtain great relief. To me this is invaluable. It is the only relief that I have ever obtained, and it has reduced my previously serious deafness to a trifling inconvenience. It is more than I ever expected to enjoy, and I owe you a debt of gratitude that I shall have reason to remember through all my mortal days." When the drum he was using had decomposed he wrote me for another. In the letter he thus remarks: "I feel lost without a drum: I need it always, especially in the pulpit. It serves the double purpose of assisting hearing and speech."

It would be easy to multiply testimonials of the usefulness of the

artificial drum. Says one in relation to it: "It affords me all the relief that I expect to have in this world, and money does not estimate its value." Says one afflicted: "I would not be without one of these contrivances for a very large price."

With regard to the material to supply the place of the best tympanum, there is room for experiment and investigation. It would seem easy to find the thing that we want; it seems to be at our finger's end; still, we do not yet obtain it. A material is required thin, elastic, and pliable; still, sufficiently hard to resist the action of the secretions which must lie in contact with it. At this point of inquiry, india rubber fulfills most of these indications; still, it is open to serious objections. It is heating, clumsy, and keeps up instead of curing the discharge. Unless prepared with care, it rapidly decomposes in the ear; and all specimens of rubber sheet, even when said to be properly prepared, also decompose sooner or later. It is not certain whether this effect can be wholly prevented. The ordinary native rubber, such as the old-fashioned rubbers were composed of, very rapidly decomposes in the ear. The creased rubber which is sometimes used is of this description, and is very unfit for the purpose. Dr. Turnbull, in the *New Jersey Medical Reporter* speaking of the effect of the discharges of the ear upon the rubber drum, says: They caused the india rubber to "wrinkle and change color, so that it had to be removed from the ear, in order to give it a chance to recover." My patient writes: "I have worn out two drums within the past few weeks;" and again: "I find that some specimens of rubber sheet decompose much more rapidly than others, and none so fast as the seamed or creased." The rubber that has even lines or seams across the sheet is native rubber, cut with a sharp knife from large blocks. It is imported from Paris, and, as before said, is entirely unfit for the purpose.

If some material could be found that possesses a degree of elasticity, which is about the only quality that makes rubber suitable for this purpose, it would greatly serve the cause of humanity. We have, with the aid of our patients, tried a series of experiments with various kinds of rubber sheet with ivory softened and steamed, with collodian sheet, and with gutta percha vulcanized. We hoped that the latter article would furnish the thing sought; but it proved too brittle and harsh. We discovered that those specimens of rubber which resisted the decomposing action of the fluids of the ear contained a larger amount of sulphur. The power of resistance depended upon the method of manufacture. If the rubber contained

about eight per cent. of sulphur, it would probably be in the best condition for our purpose. More than this would make it too stiff and unyielding. The pencil-cases, caustic cases, combs and canes in common use, are made of material which contains fifty per cent. of sulphur. It is coming into use for the purpose of attachments for teeth, to be worn constantly in the mouth. It is said that rubber thus prepared resists the action of the fluids of the mouth as well as gold or platina. The new process of preparing the native rubber, by treating it with bi-sulphuret of carbon and dry chlorine gas, would seem to be less desirable than the old one, of grinding up the native rubber and applying heat, after mixing it intimately with sulphur. The addition of sulphur prevents the action of the atmosphere, while it does not materially affect the elastic properties of the gum. The best sheet rubber for our purpose that we can obtain, contains about five per cent. of sulphur. The quantity is so variable, that it is impossible to determine, without using, whether a particular specimen will or will not prove well adapted for our purpose. The demand is so small, that it is difficult to get it manufactured in the proper manner. Those who use the artificial drum should be very careful to dry them very properly, or they soon become sticky, and decompose. On this subject my patient, before alluded to, remarks: "I have one drum reduced to a pulp, while the other is perfectly sound. The first I permitted to dry *in contact* with other substances; the latter I dried carefully in a glass tube, apart from anything else." It is not proper to use any rubber drum which can now be procured, without observing the precaution to dry it carefully, slowly, and in an isolated situation, to prevent adhesion. We have been accustomed to moisten the drum in glycerine before its introduction. It seems to better apply itself to the rupture. We have found that when decomposition begins to manifest itself in the drum, its destruction is certain and rapid. They seldom last many weeks without change, unless peculiarly fortunate with regard to the rubber used, or unless they are little worn. One writes of the new drum, and says: "I find the elliptical drum is adjusted in a fraction of the time required for one of the ordinary shape, and furnishes, I am certain, much more aid to hearing." Says the same correspondent: "I find that the thick sheet aids me less with regard to hearing, but decomposes less rapidly. The point is, to have it thin, almost diaphonous, and still durable. It is a nice point to make a good drum. If some manufacturer would undertake it, he would confer a very great favor upon many unfortunates. No rubber drum can be used, while the discharge continues, without in-

jury. As before said, the proper application is not less important than the quality of the interposing substance. Yearsley still uses his cotton-wool. In his steadfast adherence to his first method, this gentleman may be influenced by the somewhat unpleasant controversy that has sprung up on this very subject Doctors never did, and probably never will, entirely agree. It should be expected that they will at least keep their quarrels from obtaining publicity. If doctors injure one another, the whole profession suffers loss, and quackery is exalted. We are losers by the excessive journalism of this day. The slightest quarrel is advertised, and reporters are ubiquitous. There is in all our houses so much glass, that we cannot afford to throw stones. Leaving the drum controversy, without entering it, Mr. Yearsley, as before intimated, insists that his cotton is more easily applied, safer, and more cleanly; that it is easily introduced, causes no noise in the ear while eating or bathing—the other does, in some cases; that it cures the discharge, instead of aggravating it; and facilitates hearing as much as any other interposing substance. Other operators do not find it easy to acquire the tact necessary to introduce the cotton-wool; and when introduced, find it less efficacious than the drum of Toynbee. It is important to be familiar with both methods. We believe the moistened cotton frequently the best. We think that the modification proposed in this article suggests a much better article than either, in perhaps the greatest number of cases. The artificial drum often fails because it is *too large*. There should not be a complete closure of the perforation. A very small object is often sufficient to afford the necessary relief, if that object can by any means *be kept in the right place*. The following is the explanation given by Yearsley:—"The partial loss of the membrana tympani deprives the ossicula of their natural support and tension; the foreign body is so adjusted against the remaining portion of membrane as to afford the necessary support of the ossicula; and then the waves of sound break upon the object introduced, cause the membrane and chain of bones to vibrate, through which the impulse is conveyed onward to the fenestræ, to the expansion of the auditory nerve in the labyrinth, and finally to the brain." Whether this is a proper explanation of the phenomena, it is not easy to decide. It is certain that in many cases a very small drum is useful, while a large one entirely fails. At this point much judgment is required. The drum described in this article may be cut to any required size. It may owe its peculiar virtue to the fact that, when *in situ*, it at once becomes convex anteriorly, and afterwards retains

this shape. Thus is accomplished incomplete closure of the perforation, which Pilcher, as well as Yearsley, regards necessary to success.

It would seem as if the bladder of some animal, or some other unexamined material, would furnish the article required for the best artificial tympanum. If we can succeed in stimulating to more diligent inquiry in this direction, our whole object will be accomplished. We should be glad to see a better drum than the one that we introduce. In the mean while, we would beg for it a fair trial. They are to be procured at Mr. Tiemann's, in Chatham Street, or can be readily prepared by any one who can command the time, and has a little mechanical ingenuity.

Surgical Cases. By CHARLES K. BRIDDON, M.D., Surgeon to the New York Dispensary.

(Read before the New York Society of Statistical Medicine.)

The literature of hernia is rich in anomalies, and it is well known to the practical surgeon that every case of strangulated hernia is a case in itself, displaying new features, differing from those met with in other cases, and complicating beyond description its surgical pathology. Appreciating the value of correct anatomical knowledge of the normal relations, I cannot conceive that any more useful information can be obtained of the abnormal, or distorted relations of hernia, than from the perusal of recorded cases; each one offering some interesting facts worthy of being stored away for future occasions; and with such impressions, I give the notes of the two following cases, both possessing peculiarities worthy of consideration, and both successful as regards their results. The first case of femoral hernia was interesting, on account of its unusual size. The second, one of oblique inguinal, was so on account of the condition of the sac and its contents, and the effects of the latter upon the former. It will be remarked that upon opening the sac, two ounces of fluid escaped, and that a small knuckle of intestine was found in the inguinal canal; the taxis, patiently and carefully applied, had failed to return the fluid contents into the abdominal cavity. These conditions, and their effects, may be explained in the following way: it is a recognized hydrostatic law, that fluid pressure is equally and universally diffused, exerting the same influence on every portion of a containing cavity;

in such a case the sac, filled with fluid and separated from the abdominal cavity by an effectual plug of strangulated intestine or omentum, is rendered tense by the pressure exerted on its walls, and this same pressure everywhere diffused, acts equally upon the other contents; the opposing surfaces of that portion of the intestine engaged in the constriction are approximated, and form a barrier to the return of either gut or its contents. Again, the pressure acting on the largest portion of the double, or free fold of the intestine, forces it, in the form of a cone, into the stricture; the form best adapted for its effectual closure intensifying the constriction, and foiling the mechanism of the taxis. Such appeared to be the condition in the second case; the division of all bands external to the sac failing to permit the reduction of its contents, which was easily effected, on evacuating the fluid.

I. *Strangulated Femoral Hernia. Operation.*—January 24th, 1859, I was summoned at 7 P. M. to visit Bridget Mullins, a district patient of the New York Dispensary, living at 138 Reade Street. The patient is a native of Ireland, 38 years old, married, and the mother of five children. She has been troubled with a femoral hernia on the right side for the last eight years; it would come down occasionally, but a few hours in the recumbent position generally sufficed to reduce it. The last descent occurred on the 22d, fifty hours before my visit, and was rapidly followed by symptoms of strangulation; means used to return it were unavailing, and the taxis was applied for some time by an intelligent physician, but his efforts were not rewarded by success.

Present condition: Patient is a moderately stout woman, appears anxious; lies on her back, with the right thigh flexed on the pelvis, and adducted, and complains of pain in the tumor and about the crural canal; she vomits everything she takes, has a slightly accelerated pulse, no abdominal pain or tenderness, and has had no fœcal evacuation since the morning of the 22d. On examining the right groin, we found a tense elastic tumor below, and overlapping the junction of the middle with the internal third of Poupart's ligament; it was about the size of a small lemon, ovoid in shape, lying with its long axis obliquely transverse; its superficies were suffused with a blush of redness, probably the result of manipulations; it did not convey the cough impulse, and was not resonant on percussion. I advised the taxis under ether, and in the event of that failing, an operation.

9, P. M.—Assisted by Drs. Aigner, Quimby, and others, the patient was placed under the influence of the anæsthetic. The taxis was em-

ployed, but without making the slightest impression on the tumor. An incision was now carried vertically in the direction of the short axis of the tumor. The fascial coverings were carefully divided on a director, and the sac was exposed in its entire extent. It was found to be tightly constricted in the crural ring. The bands forming this constriction were divided by a blunted blunt-pointed bistoury carried flatwise along the fore-finger, and then turned with its cutting edge opposed to them. The division of all constriction external to the sac did not, however, permit the reduction of its contents, and it was found necessary to open that investment. This was done at a point where it was free from adipose deposit; the opening was enlarged to admit the finger, and exposed a knuckle of intestine firmly embraced by the neck of the sac itself. This constriction was so close that it with difficulty admitted the extreme point of the finger, and its division permitted the easy return of the imprisoned gut. The sac contained but a few drops of bloody serum, and the intestine was claret-colored, with a patch of ecchymosis of a darker hue; the wound was brought together by sutures, a compress and bandage was applied, and the patient was ordered opium, 1 gr. every three hours.

25th.—The patient says she feels comfortable; pulse about 100; tongue moist, and but slightly coated; no abdominal pain or tenderness.

26th.—As yesterday, abdomen lax, free from pain; she lies with her legs extended; diet arrowroot and milk.

27th.—Sutures removed, upper portion of wound united; the lower part is open and suppurating; general condition favorable.

28th.—As yesterday, bowels have not moved; opium every four hours.

29th.—Patient says she feels weak, and does not appear so well as yesterday; abdomen is free from pain, bears pressure well, and has no increased frequency of pulse over that of yesterday; she was perspiring freely all night. I attributed the feeling of weakness to the sweating, which had not been preceded by a chill, and ordered discontinuance of the opium, and the use of beef-tea in addition to her former dietary.

31st.—Much improved in every respect; had two copious evacuations from the bowels yesterday, and feels much relieved; pulse under 90; tongue much cleaner; abdomen lax, and free from pain.

February 8th.—The wound is nearly closed by the process of granulation; the general condition of the patient is good; bowels are regular, appetite good, and the only complaint made is of the confinement to the bed.

II. *Case of Strangulated Oblique Inguinal Hernia. Operation.*—October 12th, 1858, I was requested by Dr. John W. Corson to visit W. A. H., No. 5 Mott Street. I found the patient a tall, healthy youth, sixteen years of age; he had been suffering from an inguinal rupture for the last eight years; had worn a truss irregularly, and did not have it on at the time of its last descent, which occurred on the morning of the 11th. The efforts of the patient to reduce the tumor were ineffectual, and he soon began to suffer from colicky pains around the navel; uneasy feeling at the epigastrium, and in the neighborhood of the inguinal canal; he was also unable to retain anything on his stomach.

10, A. M.—Present condition: The patient is apparently in rugged health; he lies on his back with both legs drawn up; is restless, and appears flushed and anxious; pulse accelerated; tongue moist and a little coated. On examining the inguinal region, we discovered a tumefaction of the canal, and a tumor passing from the external ring into the scrotum, its size equal to that of a hen's egg; it was neither tense nor painful; there existed a little tenderness about the ring, but his principal complaint was of pains about the umbilicus and epigastrium, and of the vomiting. I employed the taxis unavailingly. Ordered one grain of morphine, ice to the tumor, and a visit was appointed at 4, P. M., when it was determined to place the boy under the influence of ether, and use such means as the circumstances might indicate.

4, P. M.—Assisted by Drs. Aigner, Quimby, and Corson. The patient was brought fully under the influence of the anæsthetic, and the taxis was perseveringly employed, but without effecting any reduction in the size of the tumor, which was in the condition in which we found it at the morning's visit, and it was concluded that division of the constriction offered the only means of relief. Operation:—an incision was made through the integuments and superficial fascia three inches in length, commencing over the inguinal canal, and carried downward and inward in the direction of the long axis of the tumor; the hernial coverings were successively divided on a director down to the sac; an endeavor was made to reduce without opening this peritoneal process, by dividing all constricting bands situate outside of it; but this was not sufficient, and did not permit of reduction; the sac was opened, and about two ounces of clear straw-colored serum escaped; the sac external to the ring contained neither intestine nor omentum, and appeared to have been completely filled by the serum which escaped on opening it, and yet it was evident that the canal itself had been

completely occupied, inasmuch as the fluid contents of that portion of the sac, situate external to the ring, could not be returned into the abdominal cavity. On passing the finger into the canal, a small knuckle of intestine was discovered within, firmly embraced in the neighborhood of the internal ring. I could pass the extreme point of my fore-finger beneath the constriction, and withdrew it to give the gentlemen in attendance an opportunity of examining its condition. On Dr. Aigner making his examination, the gut slipped into the abdominal cavity, and thus obviated the necessity of any further incision. The wound was brought together by sutures and adhesive strips; a compress and bandage were applied, and a grain of opium was ordered every four hours.

The day following the operation the boy expressed himself as feeling comfortable; he vomited once only, and that before he was quite recovered from the effects of the ether; his pulse was 80, and moderately full; there existed a little tenderness in the neighborhood of the parts, but nothing more than must have ensued as a necessary sequence. He steadily and favorably progressed until the 14th, when he began to suffer from retention of urine; this symptom annoyed him for about a week, and was relieved by the catheter. Only a portion of the wound united by first intention, the remainder filling up by the process of granulation; his bowels moved on the 19th, and on the 26th, the wound having been cicatrized several days, a truss was applied, and the patient was allowed to rise.

III. *Case of the Operation of Lithotomy in the Female.*—Eva Eberle, living at 216 Thirty-eighth Street, a large, corpulent woman, fifty-eight years of age, native of Darmstadt, Germany, married, the mother of seven children; came to this country fifteen years since; has always enjoyed good health until two years and a half ago, when she began to suffer from symptoms of stone in the bladder. These sufferings gradually increased, and two months ago became so severe, that she was obliged to take to her bed.

January 19th, 1859.—Present condition: General health of patient is good, and the local trouble does not appear to be complicated by any visceral disorder; she has no pain in the lumbar region; appetite is unimpaired; bowels regular; tongue moist, and but slightly coated; pulse is under 90, and of fair volume. She suffers much from incessant desire to micturate, from vesical tenesmus and from incontinence, which has existed since she took to her bed; urine is neither acid nor alkaline; spec. grav. 1010, pale, depositing a viscid, dense, opaque, and light-colored sediment after some hours standing; exhib-

its under the microscope, cells of bladder epithelium, abundance of pus corpuscles, a few blood corpuscles, and the truncated prisms of the triple phosphates. On sounding, the bladder was found empty of urine, and so closely contracted down upon the contained calculus, that it was impossible to estimate its size without inflicting unnecessary pain. She was ordered the bicarb. potass. in barley-water, an opiate suppository every night, and, her present condition being favorable, it was concluded to etherize her at the next visit, and to adopt such operative means as might be deemed most expedient.

January 21.—Assisted by Drs. Aigner, Budd, Gomez, and Hexamer. The patient was brought under the influence of ether; the urethra was gradually dilated until it admitted the index finger, which detected a calculus the size of a small hen's egg, presenting a sharply, but finely granular surface; this condition, with the microscopic examination, justifying the conclusion of its being phosphatic, and consequently friable, the dilatability of the urethra favoring its removal through that canal, and the extreme corpulency of the patient offering objections to the supra-pubic operation, its removal was proceeded with in accordance with such views. Along the finger already introduced, a blunt-pointed bistoury was carried flatwise; it was then turned, with its cutting edge opposed to the mucous lining, dividing it and the sub-mucous cellular tissue in a direction upward and outward; this incision was repeated on the opposite side; a strong lithotomy forceps was easily introduced, and the stone was crushed at the first attempt; a large quantity of the smaller fragments were withdrawn with the forceps; the central portion of the calculus resisted crushing, and was removed entire; this piece weighed half an ounce, measured one inch and a half in its long diameter, and one inch and a quarter in its shortest; it was then ascertained that no fragments remained, and the bladder was well irrigated with cold water; Simms' catheter was placed in situ, and the patient was ordered a suppository of opium every eight hours; the calculus weighed, after drying, 11 drachms.

22nd.—Patient has passed a good night, is free from pain, and expresses herself as very comfortable; pulse 96; tongue moist, and but little coated; the catheter maintains its position in the urethra admirably; the urine passes freely through it, and none by its sides. For the first few hours after the operation it was tinged with blood, but is now free from such coloring.

23rd.—Patient slept through the whole night, and says she feels better than she has done for many years; pressure over the hypogastrium elicits no expression of pain; pulse about 90.

24th.—The catheter slipped from its position last night, and the patient has been annoyed by the pain she suffers in voiding her urine, which she is able to retain one hour and a half. Ordered the suppositories to be resumed, and internally, potass. bicarb. in barley-water.

25th.—Patient says she feels much better; the dysuria has ceased, and she retains her urine one hour and a half and two hours.

26th.—Much the same as yesterday; urinates in the bed-pan; no pain; pulse 90; bowels regular; appetite and general condition good.

28th.—Pulse normal; retains her urine two hours, sometimes longer; examined her morning's urine to-day, and found as follows: spec. grav. 1010, much less deposit than before; under the microscope none of the prisms of the phosphates were found, but numerous octohedral crystals of oxalate of lime; there were but few pus corpuscles, and the number of epithelial cells were correspondingly diminished. Ordered dec. pareira brava.

March 1st.—The patient's son presented himself at my office to-day, and reported the condition of his mother. She is about the house, free from all suffering, and in better health than she has been for some years past; retains her urine two hours, and sometimes longer, and is only occasionally annoyed by involuntary discharge during sleep.

IV. *Popliteal Aneurism. Deligation of Superficial Femoral.—Cure.*—January 2d, 1858, John Lovett, an Irishman, 32 years old, presented himself at the New York Dispensary, with a pulsating tumor in the right popliteal region. He had experienced pain in the knee and along the course of the internal saphenous nerve for six months, and his attention was drawn to the swelling in the popliteal space three months before the time of his coming under observation. The tumor was about the size of a hen's egg; had a distinct pulsation and bruit, both of which ceased on the application of pressure to the artery at the pubes; the usual pressure effects were manifested in the presence of the tortuous veins of the leg, and in the severe pain which annoyed him constantly. The patient was a 'longshoreman by occupation, accustomed to laborious tasks and muscular efforts; his habits were intemperate, and he bore evidence of syphilitic contamination. An operation was advised, to which he consented, and which was done on the 9th. A ligature was placed on the superficial femoral, four inches below Poupart's ligament. The pulsation in the aneurismal sac ceased on tightening the ligature; the pains in the vicinity of the joint ceased twelve hours after the operation. On the 12th, the dressings were removed, the tumor was reduced in size; a

vessel could be traced over its surface, which pulsated, but there was no lateral pulsation in the sac itself; the temperature of the limb was two degrees higher than that of its fellow; pulsation could also be felt faintly in the posterior tibiæ, in the anastomotica magna and articular arteries. After the last date, the case progressed favorably; the ligature did not come away until the thirty-fourth day, when the tumor was solid and pulseless.

February, 1859.—The man is now following his occupation alongshore, and there is no trace of the aneurism left.

A New Function of the Placenta. By CLAUDE BERNARD.

(Translated from the French by WM. F. HOLCOMB.)

The object of my communication is to establish anatomically and physiologically that, among its uses, which are without doubt diverse and multiplied, the placenta is designed during the first stages of fœtal development to perform the "glucogenic" function of the liver before it has acquired the development and the structure in the fœtus which permit it later to perform its functions. I have for a long time been diverted from the point to which all my researches tended, because I made my experiments upon the placentas of ruminants, which are most easily procured in the slaughter-houses of Paris. For several years I have made multiplied, but fruitless, observations upon calves and sheep taken at all stages of intra-uterine life, and it was impossible for me ever to find any part of the placenta of these animals which contained glucogenic matter. In spite of these complete failures, I had recourse afterwards to the placentas of rabbits, Guinea pigs, &c. I found that there was in the placentas of these animals a whitish substance formed of epithelial or glandular cells agglomerated. I proved that these cells, like those in the liver of the adult animal, were filled with glucogen. This mass of glucogenic cells seemed to me to be situated principally between the maternal and the fœtal portions of the placenta, and after being developed they appeared to become atrophied in proportion as the fœtus approached. The time of birth I recognized in this manner: that the placenta of the rabbit and Guinea pig is formed of two parts, having distinct functions: the one portion vascular, and permanent until birth; the other glandular, preparing the glucogenic matter, and having a duration less extended. Notwithstanding there remained the negative observations made in such great

numbers upon ruminants, which were for me as unquestionable as those in which I had obtained positive results. In resuming these investigations, I have arrived at the proof of a remarkable disposition which could not certainly have been foreseen: that is, that in the ruminants, whilst the vascular portion of the placenta, represented by numerous cotyledons, accompanies the allantois, and spreads itself upon its external surface, the glandular portion separates from it, and is developed upon the intestinal surface of the amnios. From which it results, that if in the rodentiæ and other animals with a simple placenta, the vascular and glandular portions of the placenta are mingled together; in the ruminants, on the contrary, these parts of that organ are developed separately, and on distinct membranes, and can, in consequence, be observed separately in their respective evolutions. Thanks to this anatomical disposition, we can prove clearly that the vascular portion of the placenta is persistent and increases until the moment of birth, whilst we see the glucogenic portion attached to the amnios growing during the first period of gestation, and attaining at the third* or fourth month its maximum of development, then disappearing little by little, in passing under the various forms of atrophy and degeneration, in such a manner, that at the birth of the mammiferæ there will not exist a trace of the hepatic portion of the placenta. It must be added, in characterizing distinctly these organs, that during all the time of the growth and action of the hepatic placenta of the amnios, the *liver* of the *fœtus* possesses neither structure nor function, and that it is precisely at the moment when the liver is developed, and that the cells, having acquired their definitive form, commence to secrete the glucogenic matter, that the hepatic organ of the amnios begins to disappear. The hepatic "plaques" of the amnios in the *ruminants* appear in the first stages of embryonic life. They are developed gradually on the internal surface of the amnios, covering at first the umbilical cord, just to the point where a distinct line separates the skin from the amnios. Then these coverings, which, upon the portion of the membrane which clothes the cord, assume more particularly the form of villosities, extend themselves upon the other portions of the amnios in proportion as the sanguineous vessels which accompany them are developed. They increase little by little in volume, formed at first of a transparent matter; they become later more opaque, especially towards their edges, which turn up a little, and cause them to resemble in appearance a

* I can give here only an approximate limit, by reason of the impossibility to know the exact age of the calves procured at the slaughter-houses.

cover of lichen. They are, besides, in form sometimes flat, sometimes filiform, extremely varied, and sometimes so confounded with each other as to become confluent. When completely developed, these "plaques" sometimes attain a thickness of three or four millimetres; those which are filiform occasionally present a much greater length, and are now and then enlarged in the form of a club at their extremities. Later, these hepatic "plaques" cease to develop. In certain parts they become yellowish, and assume a fatty appearance; in other places they fall, and float in the liquor amnios. They leave at first a kind of cicatrix, which afterwards entirely disappears. It can be proved with the greatest facility, that the glucogenic matter is always present in the hepatic "plaques" of the amnios in every stage of their development. As soon as they appear it is easy to recognize this matter with the microscope, by the aid of iodine. When these "plaques" are perfectly developed this matter can be obtained in large quantities, and its character studied. To obtain it easily, the process consists in dipping the amnios membrane in boiling water, so as to permit the layers to be easily detached, then grind them in a mortar, and extract the matter by boiling exactly the same as for the glucogenic matter of the liver. As to its character, the glucogenic matter of the amniotic "plaques" offer the most perfect identity with that of the liver. It dissolves in water, precipitates by alcohol, and crystallizes by acetic acid. Iodine gives it an intense wine-red color, which disappears by heat, and reappears on cooling. This coloring, by iodine, of the glucogenic matter of the amniotic "plaques," takes place not only when it has been extracted from the cells by boiling, but also upon the cells themselves, as we shall soon see. Like the glucogenic matter of the liver, the matter from the amniotic "plaques" changes into dextrine and glucose with the greatest facility, under the influence of ferments, both animal and vegetable, and by boiling with strong acids. When the anatomical structure and development of the hepatic "plaques" of the fœtus are studied, the formation of the glucogenic cells can be distinctly followed, as well as the development of the matter in their interior. The amnios membrane in the calf seems to be at first deprived of well-characterized epithelium, and the tissue is found to be constituted especially of elastic fibres, with nuclei contained in a network of cells; in appearance fusiform. At the moment even of the appearance of the "plaques" there can be seen by the microscope upon the internal surface of the amnios, and at first upon that part of this membrane which covers the umbilical cord, a species of *spot* formed by epithelial cells; then in the centre of that spot can

be seen groups of glandular cells, at first in very small numbers; and it even happens that at the very first appearance of this "plaque" it seems to be formed of only one or two glandular cells. The glandular or glucogenic cells are distinguished from the epithelial cells which accompany them, first by their form, and afterwards by their reaction with iodine. In fact, if a little of the acidulated tincture of iodine be added to a papilla, or to the amniotic "plaques," and placed under a microscope, the cells will very soon be seen to take a wine-red color, while the epithelial cells will remain colorless, or become slightly yellow. Little by little, the groups of glucogenic cells increase by their development, and take the form of papillæ, particularly upon that part of the membrane which covers the cord. Examined under the microscope, these papillæ are found to be constituted of glucogenic cells, covered by epithelium. When the acidulated tincture of iodine is added, these glucogenic cells of the papillæ become a wine-red color, especially at their base, which is distinctly separated from the tissue which surrounds it. The hepatic "plaques" are composed of the same elements as the papillæ. It is very difficult to know if, in their agglomeration, they should be considered as a union of papillæ, or as having another mode of growth. All that can be said is, that they are seen to extend themselves by their circumference, which offers well-developed glucogenic cells; while in the centre, these cells seem sometimes to be at a stage of development less advanced. When the cells are broken and the anatomical elements mechanically separated, the isolated cells are obtained sometimes with a nucleus and sometimes with a nucleolus, and containing a granulous substance. This substance takes a wine-red color with the tincture of acidulated iodine. The core or nucleus, the volume of which seems susceptible of variation under re-agents, does not always take the same color with the iodine. The cells of the hepatic "plaques" of the amnios offer, moreover, a great analogy of form and of reaction with those of the liver in a state of action.

The cells of the amniotic covering and those of the liver may be separated by macerating for a time a portion of the tissue of these organs in a concentrated alcoholic solution of caustic potash. Then the contents of the two orders of cells remain insoluble, and fall to the bottom of the liquor in the form of a whitish matter, which presents, under the microscope, either the primitive form of the cells, or amorphous granulations. If, then, the excess of potash is saturated by crystallizable acetic acid, and the tincture of iodine be immediately

added, the wine-red color appears with even more intensity than in the fresh cells.

When the hepatic coverings commence to grow yellow, to fall, or to be absorbed, or to degenerate into fatty matter, changes can be perceived in their microscopic structure. The glandular cells lose in general, at first in the nucleus or core, and at the same time the glucogenic matter; so that in heating, under the microscope, one of these altered coatings with the acidulated tincture of iodine, a mingling of cells is seen, of which some are of a wine-red color, while the others remain colorless. It is proved, besides, that the cells remain colorless, are deprived of their nucleus and of their granulous contents. At the same time there is a perceivable difference between these two extreme conditions; there are some of the cells from which the nucleus and the granulous matter have almost disappeared, and in which the wine-red color is hardly perceptible.

A little later, when the "plaques" of the amnios are formed of cicatrices, only the flattened cells are found, but entirely deprived of their nucleus, and in which it is impossible to find the least trace of glucogenic matter. Later, these cells disappear entirely. When the "plaques," instead of falling or disappearing, degenerate into fatty matter, the microscope proves their presence; at the same time mingled with this fat are seen beautiful octohedral crystals, which present the same characteristics as the crystals of *oxalate of lime*, inasmuch as they are insoluble in water, or in *acetic acid*. It is unnecessary to add, that there is a complete absence of glucogenic matter in the degenerated hepatic "plaques." If now we examine, together, the evolution of the hepatic "plaques" of the amnios and the organization and development of the texture of the liver of the fœtus, we shall be struck with the connection, constant and *inverse*, which is observed between the development of the cells of the liver and that of the hepatic "plaques."

During the first stages of embryonic life,* while the amniotic "plaques" are well filled with glucogenic matter, it is proved that if the liver of the fœtus, then very soft, and composed only of embryonic cells, rounded or fusiform, be dissolved in the alcoholic solution of potash, it is not colored by the iodine, nor has it any of the

* In the commencement of fœtal life in the embryo of the calf, that is, at three or four centimetres length, I have not been able to perceive the "plaques" of the amnios. Perhaps, then, the glucogenic cells may be found in the umbilical vesicle.

characteristics of the glucogenic cells. At that epoch the tissue of the liver shows not the least trace of glucogenic matter.

At the end of their period of growth, when the glucogenic cells of the amniotic "plaques" commence to disappear or degenerate, it is found that in the liver of the fœtus, the cells having acquired the definitive form of the cells of the liver, inclose one or more nuclei with their granulous contents, which are not soluble in the alcoholic solution of potash, and they take the *wine-red* color of the iodine after the alkali has been saturated with acetic acid. It is at this epoch that the glucogenic matter can be extracted from the liver of the fœtus, which has become more firm, exactly like that found in the liver of the adult.

Later still, when the "plaques" have completely disappeared, or have entirely degenerated into fatty matter, and the fœtus is near the period of birth, it is found that the tissue of the liver, which has become as firm as in the adult, is composed of the anatomical elements which have taken their definitive form. All the cells of the liver are then filled with glucogenic matter, which can be extracted in as great abundance as from the best-fed adult animal.

From the summary of all the facts contained in these experiments the following conclusions may be drawn:

First—There exists in the placenta of the mammiferæ* a function which until now has been unknown, and which seems to supply the glucogenic function of the liver during the first period of embryonic life. This function is located in an anatomical element, glandular or epithelial, of the placenta, which in certain animals is found mingled with the vascular portion of that organ, and which in the ruminantia presents itself separately, forming upon the amnios, plaques in appearance epithelial, which without doubt everybody has been able to see, but of the use of which, until now, they have been ignorant.

Secondly—This temporary hepatic organ of the placenta, in permitting the direct study, in an isolated anatomical element, of the production of glucogenic matter, confirms and proves by a new example what I have before declared, that is, that the formation of the starchy glucogenic matter takes place both in the animal and vegetable kingdoms. The observations in this paper furnish us with still more strik-

* In birds (the hen) I have proved the existence of the glucogenic cells which develop themselves in the walls of the gizzard before the development of these cells in the liver; but not having been able to follow completely their evolutions, I will treat that subject in another communication, confining myself at this time to the mammiferæ.

ing analogies; since we see the starchy glucogenic matter accumulate around the embryo animal, just as in plants we see it accumulate in grains around the embryo plant.

Thirdly—The glucogenic function commences from the commencement of fœtal life, and before the organ which is the seat of that function in the adult is developed. But it is located in a temporary organ belonging to the appendices of the fœtus.

Fourthly—All that has been said in this paper relates only to the glucogenic function of the liver. But now the question would be, whether the biliary function which the liver possesses in the adult is equally accomplished by the hepatic organ of the placenta, as we have described. The question should be stated in these terms: to know if the glandular cells are charged with two functions, which for the time are connected, and answer one for the other; or if, on the contrary, the liver should not be considered rather as a complex organ, in which are found mingled distinct anatomical elements, the one destined to the formation of starch, and the other for the formation of bile. This question, which up to the present time anatomists have not been able to solve, in spite of the numerous works of which the liver has been the subject, seems to me to be susceptible of enlightenment, and even of decision by physiological researches, made on the one hand upon the embryonic development of the function, and on the other upon the inferior animals. I have undertaken experiments on this subject, of which I will render an account to the Academy as soon as they are completed.

The Medical Practitioners of Ancient Rome. By E. R. PEASLEE, A.M., M.D.

The adage, "*nusquam medicina non est*," implies that there never has been a nation or tribe in which the practice of medicine has not, in some form, at all times obtained. But, on the other hand, much stress has been put upon the assertion of Pliny the elder, who wrote A. D. 78, that during the first six hundred years after its foundation, or up to B. C. 153, Rome had no physicians.

Pliny's assertion, however, if correct, does not disprove the adage so far even as Rome was concerned; for there has always and everywhere been much medical practice, independent of physicians; and we have no reason to doubt that the sick were treated and taken care of at Rome, from its very foundation, by those best qualified for this of-

fice. In regard, however, to the advent of physicians, properly so called, to Rome, Pliny must have been mistaken.

Two circumstances are calculated to invalidate Pliny's statements on this subject:

1. Pliny was not a medical man, but a laborious compiler of various departments of knowledge; his "Natural History," consisting of thirty-seven books, treating of cosmography, astronomy, geography, physics, agriculture, commerce, the useful and fine arts, the moral constitution of man, the history of nations, natural history proper, and medicine. He is said to have condensed his materials from more than two thousand authors, and from the reading of his whole life.* But he, like many others of his countrymen, cherished a strong prejudice against the medical profession, and hence his testimony must be accepted with some degree of allowance.

2. The authority of Cato the Censor, who wrote about B. C. 170, or about two hundred and fifty years before Pliny, is mainly relied upon by the latter, in his statements respecting the medical profession in Rome. Cato, however, wrote not long after the time when physicians first came to Rome from Greece, or about the year of the city 583; and he manifested a violent hatred against the whole medical profession. Medicine had been first practiced at Rome under the patriarchal form; the oldest and best instructed of the relatives treating the diseases of his family as he understood them. Old Cato himself had been much interested in this domestic medicine, and had even written a book on the subject, in which he recommended cabbage as a sovereign remedy in many cases. He also venerated the number three, after the manner of the Pythagoreans; and transmitted to posterity an incantation for curing a dislocation or a fracture, which is too curious to be lost. "For curing a luxation of the hip," says he, "take a divining-rod, four or five feet long, split it in the middle, and let two men hold it at the hip and begin to sing: '*In alio, s. f., motas væta daries dardaries astataries dissunapiter*,' until the injured parts are united. The luxation being reduced, or the fractureset and properly adjusted in splints, repeat the incantation every day as at first, or the following: '*Huat hanat huat ista pista sista dominabo damnaustra*;' or, after this manner: '*Huat haut haut ista sis tar sis ardannabon dunnaustra*.' "—WATSON: from Cato de Re Rustica, Cap. clx.

It is very natural that a person in this state of mind should conceive a violent antipathy for any attempt at scientific practice, and especially if made by foreigners, professing a superiority to the method

* Dr. J. Watson: "The Practice of Medicine in Ancient Times," p. 139.

then in vogue. There are narrow-minded and bigoted persons at the present day, also, among the educated, as they are self-styled, who denounce everything that is really scientific in medical practice, and laud some one of the various phases of quackery instead; and who would speak of the present race of physicians very much in the style in which Cato denounced the doctors of his time, in a letter to his son Marcus, and from which Pliny makes a quotation: "I will tell you," said he, "when I have an opportunity, what I think of these Greeks. It is good to study, to some extent, their letters and sciences, but it is not necessary to learn them fully. Be assured, as if a prophet had told you, that, as soon as this nation shall have communicated to us its literature, it will spoil and corrupt everything; and this will be so much more easily effected, if it sends us *also its physicians. They have sworn among themselves to kill all barbarians by their medicine,* and yet they require pay from those whom they treat, in order to gain their confidence, and thus ruin them more easily. They are insolent enough to call us barbarians, and even treat us more disdainfully by calling us *opiques.* In short, remember that I have forbidden you to employ physicians."*

In the 5th chapter of the 29th book, Pliny expresses his own opinion of medicine, as follows: *Mutantur ars quotidie, toties interpolis et ingeniorum Græciæ flatu impellimur: palamque est, ut quisque inter istos loquendi polleat, imperatorem illico vitæ nostræ necisque fieri: ceu vero non millia gentium sine medicis degant.* "The art is changing daily, assuming a new dress as often as we are carried away by some new-fangled notion from Greece; and when one of these fellows gains an ascendancy by his talking, he becomes on the spot an arbiter of life and death to us; as if thousands of nations do not get along without doctors." It must be admitted, that this last sentence contains a somewhat random assertion; and it is in the same passage that he says that the art was not practiced among the Romans until the six hundredth year from the building of the city, or B. C. 153.

But though the old censor's mind was too full of prejudice and suspicion to admit of his being a reliable witness as to the merits of the physicians of Rome, he leaves us no doubt of the fact that physicians were engaged in practice there before the time specified by Pliny. In fact, Pliny himself says, (chap. 6, of book xxix,) that a surgeon came to Rome in the five hundred and thirty-fifth year after its foundation, and that he received a most cordial welcome at first; but shortly, from

* Cato, De Re Rustica. Renouard's Hist. of Med., p. 249.

his cruelty in cutting and burning, they called him a butcher, and his art a nuisance.

It is, however, very probable that both Cato and Pliny were not very much in the wrong in attributing to the foreign doctors in Rome a low degree of actual professional merit. It very seldom happens that the best physicians leave their native country, since such are always sure to be appreciated and required at home. And at this time, and long afterwards, as Galen informs us, those who flocked to Rome from Greece and elsewhere, were mostly fifth-rate doctors, or miserable mountebanks. It is said that even Asclepiades himself, the friend of Cicero, and who settled in Rome B. C. 63, descended to some of the low methods of quackery; and long after him, Thessalus, when he appeared in public, was always accompanied by a troop of bakers' boys, butchers, weavers, carders, and others of the lowest classes, whom he called his pupils, and whose vulgar language he used. He was, however, patronized by the Emperor Nero, and acquired immense wealth.

Galen explains the fact, just stated, in the following passage, and it is now as applicable to New York as it was 1,700 years ago to Rome: "In a vast and populous city, like the capital of the Roman Empire, it is easy for a stranger, and even for a citizen, to conceal his name, his birth, his fortune, and his conduct. A man is only judged by the luxury he displays and the arrogance he exhibits. If accidentally he is discovered, it will suffice him to change the location; while in a small town, all the inhabitants know each other; a man's relatives and education are so well understood that fraud is impossible."

And among the various forms of charlatanry in those days, the water doctors also flourished. The system of Thessalus was overthrown by Crinas, of Marseilles; and after the latter, says Pliny, (chapter 5th of book xxix.,) there came along one who entirely outshone all preceding hydropaths. "Condemning all former physicians, and the baths then in use, he persuaded his patients to use cold water during the rigors of winter. He plunged sick people in ponds. We have seen aged consular gentlemen freezing themselves from sheer ostentation. We have also Annæus Seneca's* personal statement in proof of this. Nor is there any doubt that these fellows, seeking fame by any form of novelty, would in a moment sacrifice our lives for lucre."

There is no reasonable doubt, therefore, that Rome had her physicians at least more than half a century previously to the time speci-

* Letters to Lucilius, 53 and 83.

fied by Pliny. But in order to settle this question independently of history, I some time ago consulted the Latin poets, expecting that, since dramatic poetry finds most of its inspiration in the pleasures and pains of daily life, I should find in the Latin comedies some allusion to the early physicians of Rome. And not to adduce other authors and other allusions, I find that in two of Plautus' comedies—Amphytrion and Epidicus—the doctors' shops are spoken of in connection with the barbers' shops; "medicinis" and "tonstrinis" being the terms used. In another of his pieces, entitled "Aulularia," I find a line demonstrating the fact that about the year of Rome 560, there were persons called doctors, who prescribed for a fee. It is this:

"Numo sum conductus, plus jam medico mercede est."

A learned commentator, (M. J. Naudet,) shows that "numus" means a "didrachma," (two drachmas,) or about 32 cents. "*Numo sum conductus,*" *I am responsible for* 32 *cents;* and the whole line may be rendered: "*They have lent me* 32 *cents—not enough to pay the doctor.*" If we suppose that three drachmas only, instead of two, or 48 instead of 32 cents, was the doctor's fee, and remember the comparative value of money, then and now, we need not wonder after all, that some of our confrères of those times got rich, and even possessed slaves; as is said in a comedy, entitled "The Captives," to have been the case with a Doctor Menarcus.* I pretermit similar illustrations from other poets, but shall, I trust, be pardoned for adducing from Plautus a pun at the expense of our fraternity. In the little scene of "Rudens" two slaves exchange the following pleasantries:

"Ut vales?" "How are you?"

"Quid tu, num medicus quaeso es?" "What is that to you? are you a doctor, pray?"

"Imo, edepol, una littera plus sum, quam medicus." "Yes, by Pollux, and one letter more than a doctor."

"Tum tu est mendicus." "Then you are mendicus, (a beggar,) and not medicus."

"Tetigisti acu." "You have hit it."

The facts, then, in respect to the medical profession in ancient Rome are simply these: For a long time after its foundation, medicine was practiced at Rome under the patriarchal form, as before explained. In the time of Caius Marius, however, the city had become well supplied with physicians. But Asclepiades was mainly instrumental (B. C. 63) in introducing scientific medicine, as then understood by the Greeks, and as laid down especially by Hippocrates nearly 300 years before. Meanwhile, of the native Romans,

* Menière, Etudes des Poètes Latins.

only slaves, male and female, were physicians at Rome; and this continued to be the case till Cæsar decreed to all who practiced medicine the rights of citizenship. It is, therefore, not strange that the low social rank of the early Roman physicians prevented them from gaining a conspicuous place in history. In Athens, on the other hand, it was forbidden by law that a slave or a woman should practice medicine; and thus a dignity was imparted which secured its transmission to succeeding times.

Galen came to Rome, from Alexandria, then the best school of medicine in the world, in A. D. 159, being 28 years of age. But he met with so much opposition from professional brethren, whom he in turn denounced as ignorant quacks, that he returned at the end of five years to Pergamus, in Asia Minor, his native place. He was, however, soon recalled, to attend the Emperors Marcus Aurelius and Lucius Verus; and having cured the two sons of the former of fevers, which the other physicians had predicted would prove fatal, he attained a distinction which enabled him to defy the power, and finally to ruin the credit of his former opponents. His writings were regarded as the supreme authority in medicine, and especially in anatomy, for 1,400 years after, or till Vesalius published his work on the structure of the human body, in 1543; and in the practice of medicine his authority was not materially shaken till a century later, and when the importance of Harvey's discovery of the circulation of the blood began to be appreciated.

It requires a great mind to appreciate the true dignity and value of our art. The rights accorded to practitioners of medicine by Cæsar, were therefore confirmed by Augustus, Vespasian, and several succeeding emperors. Augustus loaded his freedman, Antonius Musa, with wealth, for having cured him of a dangerous illness; raised him, by consent of the Senate, to equestrian rank; erected a bronze statue to his honor, near that of Æsculapius; and at his instigation conferred important privileges on the whole body of the profession residing in the city.—(Watson, p. 98.) Subsequent emperors did not, however, adopt the liberal policy of their predecessors. Nero patronized the audacious and vulgar Thessalus, and we find that within three centuries after the time of Galen, the practice of medicine had again fallen mostly into the hands of slaves; and that the Code of Justinian, promulgated about A. D. 500, fixed the legal price of physicians, male and female, at 60 solidi, or $257.12.

Thus Rome constituted no exception to the adage with which this article commenced, and Pliny was simply mistaken in his date; being

led into the mistake by his prejudice against the profession, and the desire to show that the class of educated physicians is of very little importance to the commonwealth.

The Chemical Composition of the Ash from Hair. From the French of Baudrimont.

Vauquelin established by his experiments, in 1806, the following conclusions:

1. Black hair is formed of an undetermined animal substance, a white concrete oil, a greenish black oil, iron, some atoms of manganese, phosphate of lime, carbonate of lime, a notable quantity of silica, and a large amount of sulphur.

2. Red hair only differs from black in its containing a red oil, instead of one of a greenish-black color.

3. The difference between red and black hair and light-colored hair consists in the fact that the latter contains an oil very slightly colored, and some phosphate of magnesia.

In this view, the white color which the hair assumes, with age, is occasioned by an absence of the black oil, of the sulphide of iron, or from a defective secretion of the coloring substance.

Van Lær endeavored to determine the nature of the organic matter which forms the principal substance of the hair. He considered it as formed of fibres or compound threads, consisting of one atom of protein and two of sulphur, intimately united, just as the fleshy fibres are by cellulose, with a substance analogous to gelatinous tissue, whose formula, $C_{13}\ H_{20}\ N_6\ O_5$, differs only from that of gelatine in having one equivalent more of nitrogen. In examining the ash resulting from the incineration of hair, Van Lær detected chloride of sodium, sulphates of magnesia and lime, phosphate of lime, sesquioxide of iron, and a small quantity of silica. He affirmed that the hair did not lose its color, neither in alcohol, ether, nor in the Digester of Papin; and that he had not been able to extract the different colored oils, noticed by Vauquelin.

This last conclusion, so different from that of Vauquelin, induced Baudrimont to undertake the investigation of the subject. He examined successively the ashes of white, flaxen, red, auburn and black hair. The results of his analyses, given in the following tables, are very curious. It is to be considered, however, that the ash of each particular color only being made the object of *one* analysis, it is diffi-

cult to draw any general conclusions as to the comparative composition.

Composition of 100 *parts of the Ash of different colors of Hair.*

	White.	Flaxen.	Red.	Auburn.	Black.
Sulphate of soda	22.082	33.177	18.435	42.936	59.506
" potassa	1.417	8.440	7.542		
" lime	13.576	.....	.....	.....	.....
Carbonate soda	.....	.....	.....	10.080	.....
Chloride sodium	Traces.	Traces.	0.945	2.453	3 306
Carbonate lime	16.181	9.965	4.033	5.600	4.628
" magnesia	5.011	3.868	6.197	4.266	2.809
Phosphate of lime	20.532	9.613	10.296	10.133	15.041
Sesquioxide iron	8.838	4.220	9.663	13.866	8.099
Silica	12.803	30.717	42.879	10.666	6.611

Amount of Sesquioxide of Iron in 100 *parts of Ash.*

Gray.	Bright flaxen.	Flaxen.	Mixed.	Auburn.	Brown.	Dark Brown.
4.155	2.403	4.981	5.402	5.830	6.395	3.413

Amount of Ash in 100 *parts (by weight) of Hair.*

Flaxen.	Red.	Black.	Auburn.	White.
0.474	0.421	0.39	0.258	0.266

In studying these tables, it will be remarked that the quantity of ash furnished by the different colored specimens of hair differs singularly; that the flaxen gives the largest proportion, 0.47 in the hundred, while auburn and white furnish only 0.26; and that the salts of lime, such as the sulphate, carbonate and phosphate, are found in a much larger proportion in the ash from white hair, than in that from any other color, and that sulphate of lime has only been detected in the former. In fact, in white hair, the amount of lime-salts forms one-half of the ash by weight, while in the other colors it does not exceed one-fifth. This is remarkable, but to have a permanent value it must be confirmed by numerous experiments.

The comparison of twelve analyses shows that the sesquioxide of iron is generally found in a little larger proportion in hair of a dark color, than in that of a lighter shade. Baudrimont wishes to make

this the basis of a general theory, so that the color of the hair should be considered as due to compounds, in which iron plays the rôle of the coloring principle, as in the hæmatosine of the blood, the intensity of coloration of which is proportioned to the quantity of iron it contains. His results do not, however, justify such a conclusion. In examining them, we shall find that Baudrimont, in the ash of auburn hair, detected the largest amount of sesquioxide of iron, and that no such theory as he suggests can yet be adopted. His researches, however, put us in possession of the most reliable information yet furnished on the composition of the hair. A continuation of the investigation will probably lead to the formation of a probable theory as to the true cause of color in the hair. L. H. S.

Poisoning by Camphor. From the French of DR. LECOCQ.

An infantry soldier, twenty-six years of age, was under treatment for simple urethritis, but becoming impatient at the slowness of his convalescence, he determined to treat himself; using, according to the advice of his comrades, camphor, of which he ate a piece the size of his thumb, every morning, fasting. A piece of the same size weighed over fifteen grammes, and this was eaten in an hour.

The first three days furnished no unpleasant symptoms; all the vital functions were performed in the most perfect order; the erections were temporarily checked, although the blennorrhagic discharge was not altered. The fourth day he experienced some painful sensation in the stomach, with a feeling of weight in the epigastrium during digestion, but these were so slight as not even to attract any serious notice. On the fifth day, observing no diminution of the urethral discharge, he concluded he could safely double the dose that he had taken with impunity for four days. *Thirty grammes* were accordingly taken that day, at two periods: one half in the morning, fasting, and the other half at 8 o'clock, three hours after his dinner. The morning dose produced no sensible effect Immediately after the dose in the evening, however, he retired and slept, as usual, very quietly, when about 11 o'clock he was aroused by the odor of camphor, which was becoming stronger with each expiration—an odor which was unsupportable to him, and which nothing could remove.

At the same time he experienced sharp pains in the epigastrium, with a very painful sensation of burning in the region of the stomach; pain in the head, as though it were pressed in a vice. He was forced

twice to go out and drink freely of water, not so much to alleviate thirst as to free himself from the odor of camphor, which annoyed him more and more. Soon he was seized with vertigo, and then with the continuous desire to walk, without special design. Like one intoxicated, he could scarcely keep on his legs; but in spite of this he was obliged to descend again to the court to give his lungs the fresh air which they so imperiously demanded. He ascended to his chamber, with the aid of his comrades, and fell like an inert mass upon his bed, in a state of complete insensibility. His extremities were cold, face pale, body agitated with convulsive movements; towards midnight the symptoms became so violent that he was removed to the hospital.

In the hospital, the convulsive movements reappeared at irregular intervals, there was complete insensibility to external impressions, and loss of consciousness. The pupils were dilated; pulse, at first 72, descended to 60, and afterwards reached the minimum of 50; the respiration was accelerated to 22 inspirations per minute. The patient was treated with frictions, and caused to vomit; cold compresses were applied to his head, and sinapisms employed on the lower extremities. A semi-liquid filamentous substance, containing some pieces of bread, and exhaling a strong odor of camphor, was thrown up by the vomiting. This odor was so strong in the ward, as to be offensive to the other patients.

The emesis caused the most alarming symptoms of intoxication to cease. At the end of a half-hour of active treatment he awoke, surprised at finding himself in the hospital ward, and furnished all information desired, as to the cause of the poisoning. He had great desire to urinate, without the ability of satisfying it.

During the day which followed the accident, although out of danger, he suffered from an almost irresistible desire to sleep, and slept for twenty-four hours, only arousing himself from sleep to answer questions, or to take food. Forty-eight hours after his entrance in the hospital he was entirely convalescent, having no other symptoms of poisoning than slight weariness and general *malaise*, with pains somewhat acute in the renal region. Two months after the accident there is slight dyspepsia, very violent pain in the lumbar region, and an inability to undertake his regular duties. L. H. S.

Late Researches on the Atmosphere.

The activity of chemistry, in its examinations of the accidental and essential constituents of the atmosphere, has been very great during the past year. We propose throwing together some gleanings from French and English journals on the subject, that will be of interest in a hygienic point of view.

Iodine in the Atmosphere.—Bouis has detected iodine in the rain-water of Paris during the months of April, May, June, July, and August. Since it is the opinion of some medical men that the iodine contained in the air is not without some influence on public health, Bouis considered it a matter of importance to determine in what condition it existed in the atmosphere. The solution of this question is a very complicated matter, and he has made many fruitless experiments; but the results are so interesting that they are worth publication.

Being of the opinion, advanced by Chatin, that iodine is in a free state in the air, he endeavored to detect this substance, in the first products, in the distillation of rain-water; but he discovered that it remained in the residuum of the distillation, and as rain-water always contains ammonia, he supposed that the iodine would be found in it as iodide of ammonia—a compound only slightly volatile. But the use of perchloride of iron showed that the iodine, in a large number of cases, was associated with organic substances that concealed its presence. If rain-water contained iodine in a free state, distillation alone would eliminate it; or if the iodine was in the condition of an iodide, the addition of perchloride of iron would make its elimination easy—but this is rarely the case.

In treating rain-water with perchloride of iron very slightly acid, brownish flakes are formed, resembling crenate of iron, in which case iodine cannot be determined in the products of the distillation; but if, after such treatment, the ochreous deposit be calcined, in the presence of carbonate of iron, the organic matter is destroyed, and then it is an easy matter to detect the iodine.

Bouis concludes that iodine is found in rain-water, sometimes in the condition of iodide of ammonium, but most frequently in combination with organic substances.

Atmospheric Ozone.—Dr. Moffat read a paper on the subject, at the meeting of the London Meterological Society. He stated that a slip of paper moistened with iodide of potassium and starch becomes brown after exposure to the air, but after a longer exposure it lost this color; that if suspended over a cesspool the brown discoloration would not be produced, and if a brown slip were suspended over a cesspool it

would also lose this color. "In these results," the author observes, "there are proofs of three distinct agents: one, ozone, which decomposes the iodide of potassium; the iodide being set free, produces the brown color. The second, sulphuretted hydrogen, the hydrogen of which removes the brown color by combining with the iodine, and forming hydriodic acid. The third, incompletely oxidized substances, the products of decomposition of animal and vegetable matter, which are more easily oxidable than the oxide of potassium." "As the products of putrefaction and combustion are formed at the earth's surface," Dr. Moffat concludes that, "the quantity of ozone must be greatest in the lowest strata of the air, and that consequently the quantity of ozone must *there* be at its minimum." He also states that where the air is stagnant ozone is at its minimum; and that as the north current is the lower stratum of air in motion, it is the minimum ozonic current, while the south current, being the higher air in motion, is the maximum.

The north current is the "death current," the south that of "sporadic diseases." The deadly effects of a calm are attributed to a concentration of the products of the decomposition of animal and vegetable substances, which substances are made innocuous by ozone, since it oxidizes them. In calms, fevers and cholera prevail, and the type depends on the degree of concentration of poison. Dr. Moffat has seen "an epidemic commencing with scarlatina run into typhus, and terminate in a disease of choleraic type, rapidly decline after cleansing and draining. We have no power over the winds, but he believes that if a south or ozoniferous current could be directed into 'fever-nests,' or into cholera localities, these diseases would vanish; and in proof of the correctness of this opinion, mentions that cholera declined at Newcastle in 1853, and in London in 1854, after the setting in of the ozoniferous current."

Mr. H. S. Eaton read a paper at the same meeting of the Meteorological Society, showing, from tables, that "ozone was prevalent to the largest extent when the direction of the wind was between the south and west points of the compass, and when the amounts of rain and cloud were greatest; and that the least amount of ozone was coincident with winds having a northerly and easterly direction, and with the least amount of cloud and rain." These results, it will be observed, agree, in the main, with those of Dr. Moffat.

Measurement of the Variable Intensity of Ozone.—Dr. Lankester has devised an instrument for this purpose, composed of two cylinders, contained in a box, on which is wound a band of prepared paper.

The arrangement is set in motion by ordinary clock-work. As the band leaves the one cylinder it is wound up by the other, and the arrangement is so managed that but a small portion of the paper is exposed at any time to the action of the air. The whole band is divided into 24 parts, corresponding with the hours of the day. The quantity of ozone which the atmosphere contains at different periods of the day is thus indicated by the different coloration of the divisions.

L. H. S.

Treatment of Vertigo from Gastric Derangement. From the French of TROUSSEAU and BRETONNEAU.

In the morning the patient should take a cup of a solution of *quassia amara*, made by macerating two grammes of the chips for 12 hours in a cup of cold water. The following should also be taken:

℞.—Sodæ. bicarb.
Cretæ. ppt.
Magnesiæ ää grs. xv.

Mix, and divide into three powders, which should be taken two hours after each meal, in a half glass of sugar water, the third being taken at the time of going to bed. As long-continued use of magnesia may produce looseness of bowels, the use of the alkaline powders should be suspended from time to time, so that they should be given for six consecutive days, and then resume their use for an equal length of time, after a cessation of eight or ten days. In the interval the patient should employ natural mineral waters, such as those of Vichy, Pougues, Vals and Ems, which are principally active on account of their alkaline constituents; or such as those of Bussang, Schwalbach, and Sultzbach, which owe part of their action to these substances, and most of it to the ferruginous principles they contain.

To excite the appetite, and to stimulate the contractility of the muscular fibre of the digestive apparatus, it is well to have recourse, from time to time, to the properties of strychnine. This may be given in solution, or in the form of pills of the extract of nux vomica, beginning with a dose of 0.05 centigrammes, which may afterwards be slightly increased.

The hydropathic treatment, at home, with cold lotions, or wet cloth, is in a large number of cases of undoubted utility. Above all things is it necessary to insist upon a substantial tonic regimen, moderate exercise, and everything that can favor nutrition. The use of pepsin, in the form of *pastilles*, seems also indicated in such cases. L. H. S.

PROCEEDINGS OF SOCIETIES.

Academy of Medicine.

Dr. S. Rotton Percy, one of the Committee appointed by the Academy of Medicine to investigate the subject of city milk, presented to that body, at its session on the second day of March last, a long and valuable report.

Of this report, so interesting from the nature of its subject, and so rich in its details of fact and scientific investigation, we make the following abstract:

The first obvious duty of the Committee was, by visiting the city stables, to ascertain the facts in relation to the keeping and condition of the cows, whose milk was to be the subject of inquiry. In pursuance of this line of observation, it was found that, with the exception of one stable, the amount of space allowed each cow was about three feet in width by eleven feet in length and eight feet in height; that the ventilation was badly regulated and insufficient, and that light was almost wholly excluded. The stables, though as clean as their construction and mode of occupation would permit, were found offensive in the extreme.

Swill, steaming hot and always sour, is given two or three times a day; the amount consumed by each cow being from thirty to forty gallons a day. Two of the Committee, experimenting upon this swill, drank about a wineglassful directly as drawn from the tank, and suffered therefrom, in about two and a half hours, a painful and griping diarrhœa. A little hay is given the cows in addition to the swill, and when "drying up," as it is called, a little meal or bran, to fit them for the butcher. The stable life of a cow lasts from about nine to twenty months, during which time they never leave their stalls, and have no other drink but swill. They are milked twice a day, and yield, according to the statement of owners, about an average of six or seven quarts of milk a day. Their number, in stables in New York and Brooklyn, amount to about three thousand; and counting those kept near these cities, fed on swill and brewers' grains, this number would be greatly increased.

The owners state, that the principal diseases from which these cows suffer, are "sore feet" and what they call "cow fever." This last appeared first in 1847, as an epidemic, and prevailing more or less since, attacks about one-third of the animals entering the stables. The in-

dications of the disease are, dullness of the eye, dryness of the nose, loss of appetite, partial suppression of the milk, diarrhœa, scanty and high-colored urine, offensive breath, and a tight, hard skin, the animal becoming, as it is called, "hide-bound." With the progress of the disease the belly swells, the respiration becomes more hurried and feeble, the strength gradually fails, until, at length, the animal is unable to rise. Some cases are fatal in within three or four days, while some last as many weeks. *During the whole period of their sickness these cows are milked, and their milk mixed with that of the other cows.*

Inoculation in the tail, with matter from the lung of the cow dying from the above-described disease, prevents, it is thought, the occurrence of the so-called "cow fever." It runs its course in from nine to twenty days, is attended with great inflammation of the tail, which, if it extends to the spine, is nearly always fatal.

These cows are milked during the progress of the inoculation, and their milk mixed with that of the other cows.

The author of the report is satisfied that the disease of which the majority of these cows now die is essentially different from the contagious epidemic of 1847, and that inoculation is a needless piece of folly. The symptoms now are mostly those of typhoid pneumonia, aggravated frequently by the inoculation, and caused by foul air, want of exercise, sunlight, and proper and nutritious food.

Observations upon the temperature within these stables, made in the months of July and August, indicate a range from 18° to 24° higher than that of the open air. The same great difference also exists during the winter months, with a saturation of the air with moisture even greater, if possible, than in summer.

The respiration and pulse of the cows, depending upon the high temperature of the air, saturated with moisture and loaded with animal effluvia, were found greatly to exceed the normal standard. The lowest number of respirations observed in any animal during July and August, in the inner part of the stables, was 44 in the minute, with a pulse of 114. Normal respiration should be 20 in the minute, and the pulse about 80. There can be little doubt that the heated and foul air which these animals breathe has even a greater influence in making their milk unwholesome than the food they consume.

The average mortality of these cows, so far as could be learned from one disinterested source, was about twenty per cent. per annum.

No opportunities were afforded for making post-mortem examinations, and, consequently, the Committee regret that their report does not contain a description of the usual pathological appearances presented by these cows after death.

Taking Professor Doremus' analysis of the "swill feed," and Boussingalt's of corn, and estimating 18 lbs. of corn, with a little straw, daily, sufficient to keep a cow in good milk and gaining in flesh, it appears that, in order to reach an equivalent to 18 lbs. of corn meal in nitrogenized food, the cow must consume 40½ gallons of swill; in oleaginous food, 30 gallons of swill; and in non-carbonaceous food, 161 gallons of swill.

It also appears from Prof. D's analysis, that in the amount of swill usually consumed daily by each cow, there is contained about *one gallon of vinegar*.

Numerous specimens of milk, obtained from milkmen in the city, whose supply in some cases was known to be from the country, and in others unknown, exhibited under the microscope no abnormal characters, excepting their dilution with water, and in some instances a strong tendency on the part of the fat globules to cohere.

In one instance, however, the milk from a cow met with in a stable at Williamsburg, presented under the microscope, two hours after being drawn, decided pathological appearances. The butter globules were unusually small and coherent; a number of large granular-looking corpuscles of a green color being present, together with others of about the same size, of a yellow color, having dark lines radiating from their circumference towards the centre. Also minute bodies like sporules of confervæ—also exceedingly minute bodies, in masses, which were undoubtedly diseased, dead, and broken-down globules. Examined sixteen hours subsequently, the sporules were found increased in length; the butter globules less coherent; the broken-down globules were numerous and scattered, and a peculiar reddened mass met with, which was supposed to be some portion of a diseased mammary gland.

The cow from which this specimen was procured was the only one met with by the committee suffering from disease of a strongly inflammatory type. The others that were found diseased were in a typhoid condition.

Another sample, obtained from the mixed milk of 20 or 30 cows from the same stables, examined two hours afterwards, was found to contain blood corpuscles; granulated pus corpuscles; butter globules of uniform size, coherent and overlapping each other; broken-down globules, and long narrow confervæ.*

* In regard to these confervæ, the author of the report thinks they are peculiar to the milk, and inhabit the imperfectly washed cans, and grow rapidly upon the addition of the warm fresh milk. Lehmann speaks of infusoria, or

Another sample of milk, drawn from one of the fattest cows in the distillery stables in 15th Street, exhibited larger and more numerous globules than usual, with the same cohesive tendency before remarked.

Representations of the microscopical characters of these different specimens of milk were exhibited to the Academy.

The chemical analyses of the different specimens and kinds of milk mentioned in this report were made by the author, within twenty-four hours of the milk being drawn. The quantity operated upon was seldom less than 1000 grains.

ANALYSES OF COWS' MILK.

Analyzed by	Water	Solid Matter	Butter	Sugar	Casein	Saline Matter
Poggaile	862.8	137.2	43.8	52.7	38.0	2.7
Doremus—From Mr. Suydam's cow, kept for family use	852.60	147.40	44.00	39.70	57.10	6.60
From swill-fed cows, kept in 16th Street Distillery	858.60	141.40	44.20	17.90	70.80	8.50
Percy—From one of the fattest cows in the same place	858.0	142.0	44.0	18.0	66.0	14.0
From a grass-fed cow in Westchester County	868.0	132.0	44.0	46.0	39.0	3.0
From 4 cows, kept at the Williamsburg Distillery	870.0	130.0	35.0	15.0	68.0	12.0
From the same, obtained from the man, while delivering to customers	924.0	76.0	19.0	10.0	36.0	11.0
From the same, taken from large cooling cans immediately after milking	869.0	131.0	31.0	17.0	70.0	13.0
From the same stables, obtained from the man, while delivering to customers	930.0	70.0	18.0	8.0	34.0	10.0
From the 39th Street Distillery Stables, from the cooling cans, immediately after milking	868.0	132.0	30.0	18.0	70.0	14.0
From a dealer (Decker) in East 27th Street, obtained while delivering, (country milk)	856.0	144.0	47.0	48.0	43.0	6.0
Taken from a sick cow in Williamsburg Distillery	877.0	123.0	19.0	13.0	74.0	17.0
From 16th and 10th Street Distilleries, milked in presence of analyst (4 cows)	867.0	133.0	34.0	18.0	69.0	12.0
From the same, obtained from the man, while delivering to his customers	923.0	77.0	20.0	10.0	37.0	10.0
From D. Baldwin, dealer, obtained while delivering	869.0	131.0	38.0	34.0	52.0	7.0
From J. Willets, dealer, obtained after delivery to a customer, (country milk)	860.0	140.0	47.0	46.0	41.0	6.0
From 6 Alderney cows, J. T. Norton, Farmington, Conn	829.0	171.0	72.0	47.0	47.0	5.0
Gail Borden's condensed milk	578.0	422.0	124.0	157.0	131.0	10.0
Analyses of Cream.						
Percy—J. T. Norton, Farmington, Conn	364.0	636.0	568.0	28.0	38.0	2.0
Husted's Distillery	494.0	506.0	311.0	19.0	165.0	11.0
Gail Borden	490.0	510.9	424.0	38.0	42.0	6.0
Analyses of Women's Milk.						
Percy—A lady suffering with ague in the left breast—from the right breast (healthy) alkaline	896.0	104.0	22.0	61.0	19.0	2.0
From the left breast (ague) milk acid	918.0	82.0	10.0	24.0	41.0	7.0
From both breasts of a drunken woman—acid	920.0	80.0	11.0	22.0	39.0	8.0
From both breasts of a healthy woman—alkaline	892.0	108.0	26.0	60.0	20.0	2.0
From M. R. S., (baby starving,) milk, alkaline	927.0	73.0	9.0	22.0	41.0	1.0

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some of the lower forms of vegetation, being occasionally found in cows' milk, and especially in the so-called blue milk. And Fuchs, in his Manual of Physiology, refers this coloring of the milk to the presence of an infusorium, which he terms vibris cyanogeneus.

From these analyses, it will be observed that there is a much larger amount of saline matter in the milk obtained from the distillery stables, and from the milkmen, than from that obtained from reliable private sources. Farmers add a small quantity of bi-carb. soda to the milk sent to the city, to prevent it from souring while on the journey. This is a soluble salt; but the saline matters found in swill-milk are insoluble salts—an augmented secretion from the cows. These saline matters vary in quantity, too, in the milk procured from the distillery-fed cow, and in the same milk procured from the milkman. To the latter salt is added, to "sweeten the water" with which it is diluted by the milkman.

The milk obtained from women living in cellars and damp, dark apartments, exhibits an acid reaction; while the saline matters and casein are much increased, and the butter and sugar diminished in quantity.

Does distillery milk contain all it should to make it a healthy and nourishing food? Is it not contaminated with what should not be there?

Chemical analysis lends but little aid in detecting the peculiar changes in the milk of the mother, which result from fear or anger, or why those changes should affect the child; nor can it explain the reason why a thunder-storm should turn milk sour; but by chemical examination we find that the vital fluids of the body have certain well-defined elements, any great deviation from which renders them unhealthy, and unfit to sustain life.

The physiological action of the milk from diseased cows I have ascertained, by observation and careful attention to the little patients under my care, to be injurious, producing sickness and death; and that it is incapable of forming healthy tissues, or an active, vigorous nervous system.

A chemical examination of 200 samples of milk drawn from distillery-fed cows gave, in every instance, a *strong acid* reaction; while every sample obtained from healthy grass-fed animals gave a slightly alkaline reaction. The same result was observed with the milk of women examined with this object. Eleven nursing women living in dark, damp cellars, with insufficient air and bad food, presented milk giving a *strong acid* reaction; while the milk of a healthy woman, living rationally, is *decidedly alkaline*. Drunken women who nursed, and several cases of which were examined, always gave acid milk. A goat, while running loose in the upper part of the city, gave slightly alkaline milk. The same goat, after being confined for a time in a

dark, damp outhouse, and insufficiently fed, gave milk with an acid reaction.

Swill-milk, although acid when first drawn from the cow, does not become sour, in the usual acceptaton of this term, as soon as milk from grass-fed cows, partly because it contains more salts, but principally owing to its great deficiency of sugar; when it does become sour, however, it very soon becomes putrid—much sooner than country milk under the same circumstances. The acid of new-drawn milk, just stated, is not perceptibie to the taste, and must not be confounded with what is denominated sour milk. It gives an acid reaction, while milk from cows at pasture gives an alkaline reaction. Milk from healthy cows is acid when fresh drawn, only when it has remained a very long time in the mammary gland.

Milk from cows running at large and the milk from healthy women both being alkaline, it follows that this is the normal condition of this secretion; and whatever changes it to an acid state renders it unfit for food, and injurious to the infant, as abundant examples to be related prove.

Analysis of Butter.—Butter obtained from swill-milk is always very white, and if extracted from the milk or cream by the churn, always contains incorporated with it a large amount of casein. Owing to the presence of this casein, it very soon becomes rancid, and shrinks very much by keeping, as the water contained in the casein dries out. It is softer than country-made butter, its taste is sourish and curdy, and entirely devoid of the pleasant flavor of good butter. When the butter is extracted from the milk by ether, it is white, and softer than butter obtained in the same way from country milk; and even when exposed to the temperature of 60° F., there is considerable oily matter, which may be poured off.

Mr. Gobley has found in butter a peculiar substance of a phosphoric character, and named by him *lecithine*, analogous to the *acide oleophosphorique* of Fremy, obtained from cerebral fat. Using the same methods as laid down by Mr. Gobley for detecting this substance, no trace of its presence was found in the butter made from swill-milk.

Effects of Swill-Milk upon the Health of Persons using it.—The author of the report, in the course of his investigations upon this part of the subject, met with much difficulty in ascertaining positively those persons who were in the habit of using swill-milk. By the aid, however, of a policeman, detailed for this purpose by his Honor the Mayor of the city, he was enabled to trace the milk from the stables

to the residences of many families, where children were sick with various symptoms, which could only be attributed to the character of the food used. The history of several of these cases is given in full. We transcribe two or three entire, which will be enough to show the effects produced by the diet of swill-milk, and the good result of a change to the milk of pasture-fed cows.

C. G., a boy aged 16 months, had arrived, with his mother, in the city the morning I was called. Had vomited freely, the vomited matter consisting of milk, with a little mucus. The countenance was flushed and anxious, the pulse rapid and full, the skin hot, respirations frequent. Up to this time, the child had been perfectly healthy, his diet consisting entirely of milk. The mother had taken of the milkman who supplied the family where she was visiting in Forsyth Street, the quantity of milk she usually fed her child, which had been given to him; no other food had been taken.

I thought that I had a case of simple digestive fever, brought on by the fatigue of traveling; and, as the child had evidently not entirely unloaded his stomach, I gave an emetic, largely diluted with warm water. Free vomiting took place, of large lumps of curdy matter, with much relief to the child; after which, he slept for some time. On awaking, he had a large, loose, and very offensive evacuation, containing a quantity of undigested curds. I gave a dose of oil, with a few drops of laudanum, and directed that the child should be nourished on whey instead of milk. The next day the child seemed as well as usual, and the following morning the milk, diluted with water, was resumed. About 9 o'clock that evening I was called again, the child having vomited the milk about an hour after it was taken. It was restless and feverish after it had ejected all the milk. I ordered the whey to be again given, which was continued for several days, till the mother took him with her into the neighborhood of Washington Square. I saw the child the following morning, in West Waverly Place; it was then quite cheerful and comfortable, and had taken that morning milk and water without any ill effects. The child remained here some two weeks, entirely recovered its strength, and used milk undiluted, as before its arrival in the city. The mother then returned with the child to Forsyth Street, and it had hardly taken the milk supplied to this family an hour, when it was attacked with vomiting as before. The mother, believing that the milk was the cause of the symptoms, refused to use the milk supplied to the family where she was visiting, but obtained that supplied to the family in Waverly Place.

About a week afterwards I was called again, as the child was vomiting worse than before, the milk that it then threw up being much of it coagulated. This seemed to indicate that the milk was not the cause of the disturbance; but, upon inquiry, we found that the servant had that morning used the milk reserved for the child, supplying its place with the milk taken for the family.

It was found upon tracing the source of the milk, by means of the policeman employed, that the milk supplied to the family in Forsyth Street came from the distillery stables in 16th Street, and that of the family in Waverly Place came from the country by the Harlem Railroad.

This case occurred before the excitement in relation to swill-milk had directed public inquiry to the subject.

Susan C——, Elizabeth Street, aged 4 months. The mother of this child had obtained a situation as wet nurse, and put the child in the care of one of her friends. When I first saw this child she had been fed exclusively on milk, supplied from the Williamsburg distillery stables. The craving for nourishment was intense, the child consuming large quantities of milk at a time, and frequently screaming its demand for more. The abdomen was much distended; emaciation was great, and the child, though filling itself to its utmost capacity, was still gradually starving to death. A change of milk, with a little gelatine and sugar boiled in it, a teaspoonful of cod-liver oil, with three drops of the syrup of pyro-phosphate of iron, three times a day, soon restored the child to health and cheerfulness.

Two children in Avenue B came under the attention of the author of this report, who were badly broken out with eczema upon the face and behind the ears. They lived in the same house, and took milk from the same Williamsburg swill milkman. They recovered entirely, without medicine, upon a change of milk. The change in their spirits, animal vigor, and activity was as marked as that in their appearances.

Facts similar to those above given, showing the deleterious influence of milk of swill-fed cows upon the health of children were communicated by Drs. A. H. Stevens and R. S. Kissam, and embodied by Dr. Percy in his report.

It is not found that this milk, as given to children, actually in all, or many cases, sicken them at the time it is given, but the child, though inordinately voracious, is starved and poisoned by slow degrees. The nervous system becomes irritated beyond endurance, the vitality is undermined, and the child dies of marasmus, bowel complaints, cholera morbus, dropsy upon the brain, or kindred diseases.

The author of this report then proceeds to show separately the effects of an insufficient supply of air, sunlight, and proper food upon the animals confined in these stables, and how, almost necessarily, the milk secreted by them must be of an unhealthy character, and deleterious in its influence upon children fed upon it.

And first of *air*. Do these cows, confined in such numbers in these stables, obtain a sufficient supply of fresh air? A visit to these structures, and observations upon the atmosphere, oppressive from its warmth, its moisture, and foul condition, and a glance at the hurried respiration and quickened pulse of the inmates, must convince any one that a negative would be the true answer to this question. The air in these stables is not only deficient in oxygen, but abounds in unhealthy emanations from the bodies of the animals and the decomposition of the surrounding filth. If the blood be not properly arterialized at each inspiration, how can it become healthy, or properly perform its functions? If impure, how can healthy tissues be formed, or healthy secretions be produced, or how exert a healthy or proper influence upon the brain or nervous system?

And next of *sunlight*—which these animals never enjoy. No experiments are needed to prove that man and animals kept in the dark become scrofulous and weakly. Although animals may support an existence with an insufficiency of fresh air and absence of sunlight, it is quite impossible for them to be healthy and vigorous. Darkness alone will prevent a proper metamorphosis of tissue, will deprive the blood of its fibrine, and the nerves of their power, and will generate scrofula, because air in darkness is deprived of the very ray which gives vigor to the nervous system.

Of the Food.— In the manufacture of whisky, the starch and other hydro-carbonaceous materials of the grains used are extracted, so that the swill, as fed to the cows, is almost entirely deprived of these necessary elements of nutrition. Being so poor in the elements of food, it is taken in inordinately large quantities, which is the only way by which the animal can supply its wants. Fermentation at the same time has set in, destroying a great portion of its nitrogenized matters, forming, in addition, a new compound, acetic acid or vinegar, and which continues to increase in quantity, until it becomes so sour that the animals reject it.

The effect of insufficient air and light, and the innutritious character of the food, sooner or later tells upon the character of the cow's milk, so that the component parts differ materially from those found in pure milk from healthy and well-fed cows; not so much in the

amount of solid materials, for in these they are nearly equal, but in the relative proportions of the different elements. These have already been stated, as well as the constant acid reaction which swill-milk gives, whereas the normal state of pure milk is slightly alkaline. This acid condition of the milk must induce derangements of the bowels in those children who use it, and render them difficult of cure so long as they continue to use it. If the cow is in an unhealthy condition, the milk must partake of the morbid condition of the animal which secretes it, and produce in those children who feed upon it diseases proportioned in their severity to the morbid condition of the milk, or the feebleness or inability of the nervous system of the child to resist its baneful influence.

Swill-milk is deficient in many of the elements which are essential to the growth of the child. It has been seen that the microscope discovers that its vitality is lost soon after it leaves the animal. The peculiar phosphoric organic compound found in butter, and described by Gobley, Fremy, and others, is wanting in the butter prepared from swill-milk. Children, therefore, who live upon food wanting in this essential element of growth to the brain and nervous forces, will become languid, uneasy, restless, and devoid of energy; the functions of digestion and assimilation will be imperfectly performed, and growth retarded or perverted. Where there is an insufficiency of this nerve-force, there must be a want of vital energy, and life will eventually terminate from inanition or marasmus, preceded by weakened digestion, loss of heat, and inability of the whole system to bear the drain made upon it to keep up the vital heat and force, and accomplish the necessary change in the tissues.

Independent of its being in a diseased condition, swill-milk is deficient in both butter and sugar, two essential properties for the evolution and maintenance of animal heat. The processes for the proper evolution of vital heat being interfered with, the vigor and activity of the individual are diminished. This is the fact with those children which are fed upon swill-milk.

Dr. Percy closes his report with an extract from Dr. Cummings on "Milk," as follows:

"If, then, heat is to be evolved in sufficient quantity, we must have not only enough oxygen in the air, and enough oil in the blood, but we must have a supply of nervous power, to induce free respiration by means of muscular action and strong contractions of the heart, that the blood may be forced rapidly and readily through the capillaries of the lungs. With full respiration and active circulation,

a sufficiency of oxygen will be mingled with the blood to furnish an abundant supply of caloric. With deficient nervous power, this vigorous action of the muscles of respiration and circulation is impossible. All pathological observations settle this point. It is a wonderful fact, that butter contains not only the fuel, but the material necessary for its proper combustion. Is the supply of fuel small, the consuming power is proportionally reduced. It is thus a self-regulating article. With an increase of the consuming power, coincides a proportional increase of the material to be consumed. From these facts we may readily understand how a child may be fat, and yet be deficient in strength and vital heat. Starch-fed children are often fat, and yet are languid and weak. The starch has been digested, but, as it contained no azote, it could not nourish the tissues of the body; having no phosphorus, it could not supply the wants of the nervous system. It has thus failed to produce heat or general energy. Not so with butter. This *lecithine* excites the nervous system to efficient action, and all the functions feel its influence. And thus the butter-fed child is often less fat than one fed on starch. But in all that constitutes bodily well-being he is far in advance. To promote calorification, there is no equal to butter among the articles of food usually given to children. It is probable that no substitute for it will ever be found."

NEW YORK PATHOLOGICAL SOCIETY.

DR. E. R. PEASLEE, President.

Regular Meeting, November 24th, 1859.

[Reported for the MONTHLY, by E. LEE JONES, M.D., Secretary.]

Wound of Carotid Artery.—DR. W. DETMOLD presented a specimen of wound of the carotid artery, with the following history: He was called that day fortnight to a child who had the day previous fallen half-way down a flight of stairs, upon a pair of scissors. It appears the wound bled very profusely; but the physician, who was called in the evening, succeeded in arresting the hæmorrhage, and closing the wound with stitches. When Dr. D. saw the child the morning after, it was in a comatose condition, partly unconscious, with a pulse of 170, and a small incised wound, about half an inch in length, situated about half or three-fourths of an inch above the clavicle, in the course of the common carotid. Around the wound was a diffused false aneurism, which gave a distinct aneurismal thrill. Taking into con-

sideration the appearance and history of the case, he at once thought that one of the common carotids was wounded. Finding that there was no hæmorrhage, and that the child was in such a condition, he did not deem it justifiable to attempt to apply a ligature to the wounded vessel; more especially as the application of the ligature would be impossible, without the loss of a considerable amount of blood. There was no space to find the wound in the artery, without disturbing the artery itself. He watched the child, and did nothing. A day or two after that, the child became hemiplegic on the left side, the wound being situated on the right. This paralysis disappeared in a day or two, and he thought it was caused by the detachment of a small filament of coagulum from the plug, which was carried up into the brain.

The doctor was called a second time, because of hæmorrhage, but found it to be nothing more than bloody serum, which was promptly arrested by pressure. He then directed the child to be watched. The wound was left open, but no hæmorrhage followed. In that way the child went on, with a pulse never less than 120, until the tenth day after the injury, when he died.

A post-mortem examination was made the next day, and the injured vessel exposed by a careful dissection. There was found some blood in the sheath of the vessels. It was found that the carotid was severed entirely across, with the exception of a small posterior band. The edges of the wound were related to each other in such a way that the smallest amount of pressure was sufficient to cause coaptation of the parts. He supposed that the internal jugular was also wounded, although it is nothing more than a supposition, as it was impossible, in the condition of the parts, to make a proper dissection. He supposed that the child died of phlebitis. The case was interesting, inasmuch as it proved that such an extensive wound of a large vessel could exist, and be controlled by a very slight amount of pressure, and the child live ten days after the accident.

DR. A. CLARK asked if the paralysis was not due to a temporary interruption to the circulation through the part, and that when the force of the circulation was sufficiently restored to overcome the obstacle, the brain was again supplied with its normal amount of blood, and the paralysis disappeared? He thought, if the paralysis was due to the closure of a vessel by a clot, it would hardly disappear in two days.

DR. DETMOLD stated that he believed that a small filament of the coagulated blood was separated from the main mass, carried in the

brain until it came to an artery that was too small to let it pass. In this way a small portion of the brain was deprived of its nourishment. The clot, at the end of that time, might have been absorbed, and everything go on as usual. In conclusion, he stated that he was not aware that paralysis was the result of ligature of the carotid, in cutting off simply the supply of blood to the brain.

Dr. Clark stated that Dr. Jas. R. Wood had related six instances, and in one case that was operated upon by Dr. Van Buren, a large amount of softening was found to result. He stated that more than half of the blood to the brain is supplied by the carotids.

Dr. Van Buren stated that he had a distinct recollection of three cases that occurred in his observation, in which ligature of the carotid produced hemiplegia of the opposite side. In two of these the result was instantaneous.

One case, said he, is that which Dr. Clark alluded to. It occurred under my care, at the Bellevue Hospital. It was performed upon a man, of middle age, for malignant disease of the nose. The case terminated in seventy-two hours, and on examination of the brain on the side of the ligature, there was found to exist a great amount of softening of the whole of that side.

The second case occurred at the same institution. The carotid was tied by Dr. Isaac Green. The patient was a middle-aged man. This was also attended with paralysis, which was slowly recovered from, though I think not entirely.

A third case was one in which I assisted Dr. Mott to tie the carotid, for malignant tumor of the throat and fauces, which was very vascular. I remember suggesting at that time to him, that the patient, who was sitting in a chair, might have a better chance to keep the vessels of the brain full, by lying on his back. Dr. Mott, however, did not take the suggestion; he tied the artery, and there was instantaneously hemiplegia of the opposite side. The patient, after a while, recovered from the paralysis, but the disease showing a disposition to return, the carotid of the other side was tied. In that case paralysis was also the result, but it was in a less marked degree, and only lasted a day or two. The patient got well of that operation, and went home in the country.

He thought that in all these cases, the paralysis was due to the interruption of the supply of a proper amount of blood to the brain. In conclusion, he referred to the case of a young lady, 17 or 18 years old, for whom he tied the carotid for disease of the scalp. One carotid had been previously tied by Dr. Jno. Kearny Rodgers.

In that case there was no positive paralysis resulting. For twenty-four hours succeeding the operation there was a slight tingling of the arm and leg of the opposite side.

DR. BATCHELDER stated that he had experimented considerably upon the carotids of lower animals, had cut them off completely, and found that they bled very little.

DR. DETMOLD stated that the pulsation of the artery above the wound was as clear as below; hence it was not cut off in a way to allow it to retract and form a coagulum. He stated, in connection with the remarks made by Dr. Batchelder, that he had also experimented upon lower animals, and met with the same results. He found that the vessel would heal without obstructing the circulation.

DR. JOHN C. DALTON next read the following report from the committee appointed to examine into the case of Mr. Groux, which has already appeared in the MONTHLY for January, 1859.

Abscess of the Brain.—DR. GEORGE F. SHRADY next presented a specimen of extensive abscess of the brain. It was removed from the body of one of the victims of the Thirtieth Street tragedy, who died at the New York Hospital on the 14th of November. The history of the case was as follows:—

Elizabeth C——, æt. 23, native of Ireland, was admitted to the New York Hospital October 26th, during the attendance of Dr. Markoe, with scalp wounds, which were inflicted by a hatchet. Two of these wounds were situated just to the left of the median line, near the vertex, longitudinal in their direction, about half an inch from each other. The third was situated posteriorly on the right side, over the occipital bone, semicircular in form, and caused by a glancing blow of the weapon. They all extended to the bone. The skull itself did not seem to be injured materially. Several small pieces of the external table were chipped off in the posterior wound, and at the bottom of the wound nearest to the vertex there was a small groove in the bone about 1½ inch in length, evidently caused by a direct blow upon the part. When first seen, she was considerably prostrated, both from the shock of the injuries received, and the loss of a considerable amount of blood; though there was no cerebral disturbance present. Reaction soon came on, and everything progressed favorably. She continued to do well, the wounds granulating nicely, until the 3d of November, eight days after the injury, when she complained of severe pain in the side of the head, in the region of the wound, attended with a great deal of febrile excitement, dilatation of the pupils, and the occurrence of hemiplegia of the right

side. From that time she began to be stupid; her bowels were freely opened, leeches were applied around the wound, a blister to the back of the neck, but without any good effect. Coma supervened on the third day after, when an operation was attempted for her relief by Dr. Parker, who was at that time attending surgeon. During the night previous to the day of the operation the patient had four general convulsions, which were quite severe.

Taking these symptoms into consideration, it was thought possible that a portion of the internal table of the skull was depressed at the situation of the groove on the outside. Dr. Parker trephined over this spot, removed a button of bone, and found a small spicula of the vitreous table splintered off at a point corresponding with the external injury. The dura mater was diseased at that point, thickened, softened, and was unavoidably wounded by the trephine. A portion of this membrane, about as large as a twenty-five-cent piece, was cut away. The brain substance immediately underneath did not seem to be injured, and presented no marks of any abnormal action except a considerable discoloration of the part.

The wound was left open, and dressed with cold water. The next day after the operation her mental functions were sufficiently restored to enable her to answer some questions intelligibly, but the appearance of her pupils was unaltered. On the 8th, three days after the operation, a small fungus, about the size of the end of the finger, made its appearance, projecting from the centre of the wound. Still, she kept on improving, complaining only of an occasional pain in the head, of which she was always alleviated by the application of leeches. The pupils still kept moderately dilated. Her pulse, during all the time, ranged between 90 and 100, was moderately full, but compressible.

On the morning of the 11th, six days after the operation, she was seized with another general convulsion, making the fifth. It was by no means so severe as the former ones, and lasted but five minutes. She continued in this state with a good deal of intelligence, able to answer questions promptly, pulse quiet and full, until the night of the 12th, seven days after the operation, when rather suddenly coma again came on; her pupils became again widely dilated, pulse 92, and thready. Leeches were again applied, and blisters placed on the back of the neck, but no abatement of the symptoms followed their use. During the day the fungus, which had increased none since its formation, was noticed to shrink away into the cavity of the skull, leaving nothing but the thickened scab which formerly covered it.

The coma grew gradually more profound during the following night, the pulse growing more and more feeble, until 11 A. M. of the 14th, when she died. Early on the morning of her death, on removing the wet cloth from the wound, it was found to be smeared over with brain-matter; this discharge continued until death took place, and amounted in all to a small teacupfull.

The *post-mortem* examination was made four hours after death. The whole superior surface of the dura mater was thickened, and at the situation of the hole in the skull there was an opening into it nearly as large as a half dollar, nearly circular in shape, with ragged edges. This opening discharged through it a considerable quantity of broken-down brain-substance, mixed with pus of a pinkish hue, which formed the contents of an immense abscess of the brain, occupying fully two-thirds of the whole substance of the left hemisphere. The cortical portion of the organ was destroyed for a considerable space around the wound in the dura mater. The cavity of the left ventricle was found to be entirely obliterated; the *corpus striatum* and *optic thalamus* were almost entirely destroyed by the diseased action. The septum lucidum was partially destroyed. The corpus callosum was very much softened. The right hemisphere was very slightly affected, the softening being very superficial, and limited to the superior margin of the longitudinal fissure. The walls of the right ventricle were somewhat broken down, and the cavity was to a certain extent filled with the same material. Besides this, there was a small deposit of flaky pus around the optic chiasm, in the fold of the longitudinal fissure.

I omitted to state that, at the time of operation, there was a very small quantity of pus seen to flow from the wound in the skull.

DR. DETMOLD, in this connection, referred to a case of an extensive abscess of the brain-substance, about half an inch below its surface, evacuated by a free incision. When he first saw the case the patient was comatose, the pulse 40, breathing stertorous, &c. He removed a portion of bone, and found the dura mater perfectly healthy, but from the nature of the case, being under the firm conviction that an abscess did exist in the brain-substance, boldly cut through, and evacuated it. While the pus was flowing the patient recovered consciousness. The quantity of pus discharged amounted to five or six ounces. After that time the patient got about for a couple of months, and with the exception of his memory, which he entirely lost, he did very well. His reasoning powers seemed to be unchanged. He lived sufficiently long to allow the wound to heal up, with the exception of

a small opening, through which a probe could be introduced for its whole length into the lateral ventricle. At the end of a couple of months trouble in the brain again made its appearance, pus formed in the ventricle, and was evacuated; but he died soon after. It was found that the septum lucidum had ruptured, and discharged some of the contents of the diseased ventricle into the one on the opposite side.

Dr. Van Buren, in this connection, referred to an analogous case of another one of the victims of that tragedy. The wound was about an inch and a half to the left of the mesial line on the top of the head. It presented a solitary fissure, which penetrated the skull, and resembled very much the appearance of a chop in a log by a single blow with a broad-axe. It was impossible to bring the edges into any correct apposition. A probe being introduced into the wound, went into the substance of the brain. I was satisfied that the dura mater was injured, and went no farther. The patient had no concussion, and no paralysis whatever. Under the circumstances, I thought it was best to close up the wound, in hopes that the opening in the dura mater might also be obliterated. This was accordingly done by sutures. The patient did well for thirteen days; then he was seized with convulsions, after which he was thoroughly paralyzed upon the opposite side. With a pair of cutting forceps the cranial bones at the seat of the injury were carefully gnawed away. It was then discovered that some of the fragments of the internal table were detached by the force of the blow. These spiculæ were found to be adherent to the dura mater, and when detached pus was seen to flow. The child looks very much at present as if he was going to get well. It is now fourteen days since the operation. The convulsions have never recurred, the paralysis is going off, and the child is improving in every way. There could be noticed no obvious perforation of the dura mater at the time of the operation. After the operation everything went on very slowly, and in the mean time he began to be excessively pallid. This state of things had been noticed by Rokitansky, who supposed it to be due to a lack of power to elaborate the blood corpuscles.

He stated that four out of six of these victims were paralyzed on tho opposite side of the injury—the child, the father, and the young woman taken to the hospital. The other two were not paralyzed; one of them was injured but very slightly, the other very severely. The mother had only two superficial scalp wounds, and one deeper one, injuring the squamous portion of the temporal bone. He hoped that the internal table was not injured. The eldest son was very

severely injured. It was the most extensive and formidable one of the six, and yet not a bad symptom has shown itself since the injury, and is now on a fair way to recovery.

DR. W. BIBBINS cited a case of a little child who had fracture of the skull, caused by a spade falling a considerable distance, and sinking upon the top of the head. The wound was quite an extensive one, though the dura mater was found to be uninjured. The wound was left open, and the child went on perfectly well, and recovered without a bad symptom.

DR. W. PARKER thought that surgeons strove altogether too much for union by first intention in these cases. He could never succeed to his satisfaction. Upon the whole, he preferred nature's second intention to her first—it always seemed to turn out better.

DR. BATCHELDER stated that if the dura mater was injured, and the scalp could be induced to close up by first intention, the hole in the dura mater would close itself up, and fungus by that means would be prevented.

DR. KRAKOWITZER stated that Dr. Isaacs examined a case of fungus cerebri, where the matter protruded was essentially brain-matter; that is to say, he found under the microscope the peculiar granules, cells, and nerve-fibres. Dr. Krakowitzer thought if the dura mater was extensively lacerated, so that there was a large opening into it, fungus cerebri would not occur. He had trephined a few months previous, where he removed a square inch of the dura mater, yet no fungus made its appearance. In another case, where the dura mater was wounded, he closed it over with the flaps, and at the end of five days after he found that a considerable portion of the external table was necrosed. He thought if the wound had been left open this would not have taken place.

DR. PARKER referred to a very interesting paper upon this subject by Dr. Gurdon Buck. In all those cases the fungus was found to be brain-matter. He stated that Abernethy's idea was that these growths were of a morbid character, and sprung from some portion of the brain. Dr. Parker believed that a portion of the brain became softened by inflammatory action, and as a consequence was protruded through the opening in the dura mater by the *vis a tergo* of the heart.

DR. KRAKOWITZER thought that the fungus was a new growth, and that Dr. Isaacs' case was a very rare exception.

DR. PEASLEE thought that those cases where the brain-substance itself is protruded must be very rare. He thought that they were made up of granulations, and were a new formation.

Dr. Clark stated that he had examined, in two of Dr. Buck's cases, portions of the fungus under the microscope, and was positive that there was not a particle of brain-matter in them. He had examined in all about five cases, and in neither did he find the least trace of any brain-matter. He thought that the production of new brain-matter was an impossibility. He did not believe that any microscopical observer had ever found it. Instances, he said, had occurred where a considerable amount of this material had been found, and where the cavity had been filled with serous fluid, the patient recovering. He stated that there was not the slightest shadow of evidence that went to show that brain-matter once destroyed could ever be reproduced.

Uræmia—Fatty Kidneys—Stricture of Urethra.—Dr. C. R. Agnew presented the following history of a case:

Francis Nichols, 31, colored seaman. Admitted November 23, 1858. Patient, owing to a morbid sluggishness of intellect, can give no complete history of his previous condition, but only states that he has been subject for a long time to habitual constipation, alternating with diarrhœa; to headaches, pains in the lumbar and abdominal regions, and occasional dyspnœa. He has been somewhat addicted to alcoholic potations, and latterly his *slight* ailments have generally been attended by delirium. For the last two days he has suffered as at present, on admission, from severe pains in the forehead and in the abdomen, attended by constipation without abdominal tenderness. His circulation is much excited, pulse 120, quick, moderately full, and cordy. Skin dry, of normal heat; tongue thickly furred, white. Bladder not distended. The patient's mind is confused, and disposed to delirium. Notwithstanding the arterial excitement, there are no rational nor physical signs of acute disease in the chest or abdomen.

Treatment.—Ordered stimulating enemata, warmth to the surface, and sinapisms, to induce cutaneous action.

25th. The use of the enemata, and on the following day of calomel and ol. ricini, induced copious bilious stools, of an ammoniacal and highly acrid odor. Pulse still quite hard, 100 per minute. No sensible perspiration.

27th. Has now marked diarrhœa; the stools of the same character. The urine has, since admission, been voided very frequently, and in small quantities, about every three hours; is of ordinary color, albuminous, of acid reaction, and contains no precipitate. A stricture large enough to admit a flexible bougie, size 3, exists in the spongy portion of the urethra, near the bulb.

28th. Early this A. M. patient was seized with acute delirium, and

in rising from his bed, fell in an epileptiform convulsion, lasting about five minutes, and followed by slight coma. He continued for some two hours after partially insensible, and much prostrated. Pulse now, at 9 o'clock A. M., 96, smaller, softer. Ordered wine, ord. opium, to abate the diarrhœa.

December 2nd. Patient has, since last note, been delirious and drowsy; sometimes less so than at others. The abdominal pain and the headache continue; bowels soluble. A slight convulsion last night.

5th. Patient had another light convulsion on the evening of the 3rd instant. The drowsiness increased, and the scanty and frequent discharge of the urine continued till the last evening's visit, when his breathing became more livid; sighing and anxious; partial coma came on, and death took place at 10 this A. M.

Autopsy.—Great emaciation. No anasarca. The brain found rather anæmic. No effusion under the arachnoid, or in the ventricles. About ℥ij of purulent-looking fluid in the right pleura, which was adherent to the diaphragm. No other effusion or adhesion. Vesicular emphysema in both lungs; most marked at their apices and free anterior borders. Other viscera exhibited no morbid appearances, except the kidneys, bladder, and urethra, which are presented for inspection. In the urethra is an organic stricture some two inches long, $1\frac{3}{4}$ inch of which is situated in the spongy portion of the remaining 2 or 3 *lines*, in the membranous portion. Corresponding in direction and length with it, on its dorsal aspect, is a false passage, that, being slit open, shows a regular canal, with two or three shallow pockets on its surface, which is smooth and polished, but without the whitish color of the mucous membrane. There is also another pocket 2 lines deep on one side of the distal orifice of the stricture. The bladder is contracted to the capacity of about one ounce, its coats thickened, and its mucous membrane of a slaty color, indicating chronic inflammation. A similar appearance of the mucous membrane is traced along the ureters, which are not dilated, and also found in the pelves of each kidney. The kidneys are in the second stage of Bright's disease; fatty degeneration, of denser consistence than normal; the cortical substance in each much thinned, and the tubular mostly disorganized.

Regular Meeting, December 8, 1858. E. R. PEASLEE, M.D., President.

Softening of Cranial Bones.—DR. KRAKOWITZER presented a very interesting specimen taken from a child who died when four and a

half months old. The child was born on the 18th of last July, and the parents are to all appearances healthy. On the 2d of November it was taken with symptoms of gastric derangement, for which no other cause could be found except a couple of severe frights the mother experienced the day before, as a consequence of which her lacteal secretion was suspended for twenty-four hours. This gastric derangement was soon followed by congestion of the brain. By a careful application of ice to the head, and the judicious use of calomel in cathartic doses, this tendency to determination of blood to the brain was controlled in the course of three or four days, but there was a train of symptoms remaining which proved that exudation had taken place. The child was very restless during all this time, and the appetite was very capricious, and there was a tendency of the head to be drawn back by a rigid contraction of the muscles between the shoulders. The lower extremities were bent voluntarily upon themselves, and it was impossible to overcome the contraction. There was never any dilatation of the pupil, never any vomiting. The child had three or four passages in the twenty-four hours. About the fifth or sixth day it was noticed that the child would only lie on the right side. On the seventh day my attention, said he, was directed to a singular conformation of the head: it had lost its symmetry, and was flattened on the right side, in the parietal region, with a proportionate protrusion of the frontal region of that side. On going over the head, he found that the resistance of the bones on the posterior part of the parietal region was less than normal. Pressure gave rise to a slight crackling noise. This yielding of the bones increased gradually every day, without the other symptoms changing in the least. In eight days after, he first noticed this tendency to softening and disappearance of the bony substance in the situation of the posterior fontanelle, leaving a space about as large as the three fingers, where no bone was felt at all. He considered this condition of things unsusceptible to treatment, and gave, merely with a view of removing the exudation, the iod. pot., together with the local application of ung. hyd. On the 19th of November the child was thrown into convulsions all over the body, with the exception of the left upper extremity, which was relaxed and pendulous. This convulsion lasted four or five hours, and the child came out of it a good deal better, as far as the rigid contraction of the muscles was concerned. While under the convulsions, heroic doses of calomel, 2 grs. every two hours, were given, until twelve such doses were taken.

About this time, Dr. JACOBI, who saw the case, suggested the ad-

ministration of phosphate of lime in some shape or other, with a view of counteracting this tendency to softening of the cranial bones. The tart. emetic ointment was applied to the scalp, and 3j doses of the compound syrup of superphosphates, together with quinine, were given. The quinine was soon after stopped, on account of the loss of appetite which it occasioned. The mother, by this time, had sufficient milk to nourish the child. To this allowance a pint of beef-tea was added daily. Under this treatment there did not take place any improvement in the head symptoms, but further softening in the cranial bones did not go on. In the course of a week there was noticed that in some spots, where before, by pressure, not the least sensation of bone could be felt, that a slight crackling was evident. In about twelve days from the time that the child was placed under this treatment, the regeneration of the structure in the occipital and parietal bones progressed so rapidly, that two days before he died the head had commenced to assume its normal shape; still, there was no abatement in the other symptoms. The child, during the whole period of its illness, never lost its consciousness for one moment, except during the attack of convulsions. The child died in a severe convulsion, on the 4th of December.

There was one feature which attracted his attention towards the close of the disease, which was this: The child, very soon after the first invasion of congestion of the brain, showed symptoms of slight bronchial trouble, which for eight days kept pretty much the same. About a week before its death he was taken with a short, dry, spasmodic cough. This would continue incessantly, sometimes, for twenty minutes. The mother said one paroxysm lasted about three hours. He considered this cough to be the result of irritation of the par vagum. It subsided under the use of powdered root of belladonna.

Autopsy, eight hours after death. On laying open the cavity of the skull, clear serum escaped, to the amount of 2½ ounces, which had accumulated in the arachnoid sac. On inspecting the brain, it was found that there was a good deal of coagulated lymph in the pia mater; most in left hemisphere. This effusion of lymph was not only on the top, but on the lower aspect of the cerebellum. The brain itself was pale, but not very soft. Both ventricles were equally dilated, each containing about an ounce of clear serum.

This portion of the calvarium presents an unusual extent of softening of the bony structure—most marked on the right side—extending over nearly half of the parietal bones, and affecting, also, to a small degree, the occipital. At some points the bony structures seem to be entirely absent.

In answer to a question from Dr. Finnell, he stated that no softening of the other bones could be found to exist.

Dr. Peaslee remarked, that there were two points of interest to be taken into account: 1st. The change in the composition of the bone, owing to defective nourishment. 2d. That the bone was restored so rapidly.

Dr. Henschell observed, that Gaerghan, of Hamburg, referred to three cases of softening of the cranial bones. He, in two of these cases, gave, with good effect, the phosphate of lime.

Dr. Krakowitzer stated that Elses was the first who had written upon this subject, and had collected fifty cases. As far as he recollected, this was the youngest case. The disease generally commenced in the occipital bone; but in this instance he was quite sure that it originated in one of the parietal bones.

In answer to a question, he stated that the child had always been healthy up to 24 hours previous to the mother taking the fright.

Exsection of Head of Femur for Morbus Coxarius.—Dr. Markoe next presented two specimens of *heads of femur exsected for morbus coxarius.* One was removed from a boy about eight years of age, in whom the symptoms of hip-joint disease developed themselves about ten months previous. He was treated in the N. Y. Hospital by rest, the straight apparatus, &c., but it was attended with no success whatever. About three months previous to the operation an abscess formed on the side of the thigh and opened itself. From that time he lost ground very rapidly, until finally the only chance left for him seemed to be exsection. The operation was performed on the 27th September. A longitudinal incision was made about seven inches in length, commencing three inches above the trochanter, and another at a right angle about five inches in length, commencing over the trochanter. On opening into the joint, the capsular ligament was found to be very much diseased and broken down, the head of the bone was found to be carious, and the surface of the acetabulum was also found to have undergone degeneration. Rotating the thigh outward, the head of the bone became dislocated forward; the chain saw then being applied, the head was separated close to the trochanter. The severed portion was found to be much softened and irregularly eroded. The periosteum of the neck was loosened, the whole surface was very much reddened, and gave the appearance of a bone in a high state of inflammation. The remaining portion of the bone seemed to be healthy. The surface of the acetabulum was found to be diseased to a considerable extent, all of which was removed by the gouge.

The longitudinal incision was closed up, the other being left open for the discharge. Moderate extension was afterwards kept up by means of a pulley. Since the operation the patient has continued to improve. It is now eleven weeks since the operation, and the patient is able to set up all day. There is now nothing left but a fistula, which discharges about a drachm per diem. He is now able to raise the limb from the bed, and the prospect is that the patient will have a good recovery.

In the second case the patient was also a boy, eighteen years of age. His history was similar to the one just related. In this case there was no marked deterioration of the general health, and the danger to life was by no means so great as in the former case. We regarded it as an ulceration and destructive disease of the bone, and thought that we would seize upon a favorable opportunity for its removal. The disease had existed for six months, and an abscess had opened itself two months previous to the operation. A doubt arose in our minds in regard to the extent of disease in both cases; it was impossible to determine what was the extent of the erosion. In both cases, when the patients were etherized, we tried to produce the grating sound by rubbing the surfaces together. In the first case we succeeded in getting this sensation in a slight degree; in the second we could get none, although the disease was far more advanced than in the first instance. This state of things was owing to the fact that the diseased bone was covered over with plastic lymph. The operation was carried on very much as in the first instance. The head of the bone removed was much diseased, and those portions which were not covered with flocculent lymph presented a honeycomb appearance, and was so soft that the finger could easily be pushed into it. The tissue of the head of the bone was found to be infiltrated with a large amount of pus. Below the point of section in the femur the tissue of the bone seemed to be perfectly healthy.

DR. SAYRE stated that he believed he had the honor of being the first to perform this operation of exsection of the head of the femur in this country. The patient was six or seven years of age, and the operation was performed 20th of March, 1854. He was struck with one feature in the cases just related: the absence of the grating sensation when the surfaces of eroded bone were crowded against each other. He supposed it to be owing to the distention of the joint with fluid, inasmuch as effusion into the cavity of the hip-joint will produce the peculiar hip-joint deformity. In his case a single longitudinal incision was made. There was a considerable effusion into the joint, and he was not able

to get the grating sensation until the fluid was evacuated. His case was perfectly successful, and recovered at the end of seven months, with $\frac{3}{4}$ of inch shortening. The patient now has almost perfect use of the joint.

Dr. Batchelder said that he removed the head of the femur twenty years ago; that the operation was perfectly successful. An opening which existed was enlarged by the compressed sponge.

Dr. Sayre did not think it could justly be considered an operation of exsection, as the portion of bone came away of itself.

Enchondromatous Tumor of Thigh.—Dr. Willard Parker presented a specimen of an enormous tumor removed from a patient thirty years of age. The patient is a farmer, of good constitution, and never suffered from constitutional disease. About six years ago he first discovered a tumor, about the size of a pullet's egg, on the anterior aspect of the thigh, two or three inches above the lower extremity of the femur. Whether it was movable or attached he is unable to say. The tumor gave him no uneasiness or pain, nor did it seem to interfere with his general health. He came to the city on the first of last November. He advised him to go to the hospital, and a consultation of the case was held by the surgeons, who decided that it was best to amputate the limb. At that time there was a little increase of temperature in the tumor. The veins over the tumor were somewhat enlarged, and gave the appearance of tortuosity common to malignant tumors. At certain points the tumor was elastic and had the feel of fluctuation. Its whole extent was thirty-six inches in circumference, and thirty-two in length, commencing about three inches below the trochanter, extending to an inch below the knee. Nov. 25th the limb was removed; on cutting into and removing the integument, the muscles in the vicinity were found to be flattened out over its surface. The tumor seemed to be situated in a dense cellular substance or sac. The tumor is attached in its lower portion to the entire surface of the femur. The nerves were not interfered with, and the tumor seems to have grown around them. The artery could not be traced below the upper extremity of the tumor. The tumor seems to be composed of dense lobules, ranging in size from an English walnut to a child's head, imbedded in dense fibrous structure. At some points there are distinct firm masses of bony substance; at other points, instead of this bony substance, we have a sort of calcified material; then again we have a sort of limy deposit. The stroma is made up of cells, from .1000 to .1500 of an inch; they are not cancer-cells. This form of tumor is beautifully described by Mr. Paget, and is called by him fibro-car-

tilaginous; also described by Müller, who denominates it enchondromatous. He has seen this form of tumor in four or five instances originating in the phalangeal bones. This is a benign tumor, although, as stated by Mr. Paget, it now and then recurs. It is usually slow in its growth, as is commonly the case with bony tumors. Sometimes, however, it is very rapid. Paget relates a case that was in Bartholomew's Hospital, where there was such a rapid growth that the patient succumbed in three months. This tumor is next to the largest on record. The largest is one reported by Sir Philip Crampton, of Dublin, where the tumor measured 6½ feet in circumference; the one now presented is 3 feet.

DR. BUCK, in this connection, referred to a case that had been under his observation for the last two years. The patient is a gentleman forty-five years of age, who he supposes has this same disease, occupying the lower three-fifths of the thigh. The tumor has attained a considerable size, not, however, as great as this, and differs from Dr. Parker's case, in the fact that it is even and symmetrical. It has a distinct limit above where you recognized the same bone and muscles surrounding it; at its lower portion it is so situated as to embarrass the motions of the knee very considerably. Two years ago he suffered a good deal of pain in it; so severe and perpetual was this symptom that he was compelled to use anodynes freely. A consultation was held, and the question of an operation came up, either of tying the femoral or amputation. We finally came to the conclusion that an operation had better be deferred; the sequel of the case has shown that the advice was judicious. Within a year the pain has so far ceased that he is enabled to dispense altogether with the use of anodynes, and is able to attend to his business. He has seen him within the last four or five months; the growth is very moderate, almost requiring measurement to determine its increase. He is now free from pain, and his general health is good. At no point is there anything like fluctuation, as in Dr. Parker's case.

DR. GOULEY stated that the greater portion of the class of tumors denominated osteo chondroma were made up of fibrous tissue and hyaline cartilage, together with large and small cartilage cells. The bony tissue found in them did not contain the lacunæ and canaliculi.

REVIEWS AND BIBLIOGRAPHY.

The Transactions of the American Medical Association. Instituted 1847. Vol. XI., pp. 1,027.

This is a portly volume, well printed on good paper, bound in muslin, and quite creditable in its general appearance. It contains eighteen papers on professional subjects—some very brief, some very long—and two prize essays. Five of the papers are illustrated either by maps, colored lithographs, or wood-cuts, all of which are good, and answer the purpose for which they are designed. Turn we to glance over the separate papers which the volume contains.

The address of the president, Dr. Paul F. Eve, is not in accordance with our taste, though better than some of its predecessors. It is chiefly a glorification of the association, as if some one had proposed the very pertinent question, what good has the association done? and the president had undertaken to answer it. We are quite struck with his enumeration of its labors, and therefore report them, with the short commentaries which they suggest to us. In the ten volumes of Transactions, published before this, "three hundred pages are devoted to medical education;" (there are ten more in vol. xi., and the result of the whole is nothing;) "over five hundred to hygiene, including the sanitary condition of many of our large cities," (and which of them is improved by it? certainly not New York;) "six hundred to botany, and indigenous plants;" (very dry, though very scientific—read by few, understood by fewer;) "one hundred and fifty to obstetrics; (far less than this progressive department should have furnished;) "four hundred to medical literature," (in which there are almost as many different opinions expressed as there are writers, and which has produced as much effect as the reports on medical education;) "seven hundred and fifty to medical science proper," (a distinction not making very clear to our mind the author's meaning;) "more than a thousand to surgery," (in which are some of the best papers of the volumes;) "and two thousand to practical medicine, including the epidemics and prevalent diseases of nearly every State in the Union," (which is in reality *the* thing that has been best done by this association, and by which some one may hereafter be aided very materially in writing the history of the epidemics of the country, possibly in tracing them to their sources.) If in this extract the president has enumerated all the pages of the series of Transactions, which are devoted to professional subjects, it makes a total of 5,700, or a little more, issued in ten years. Averaging this, it makes 570 pages per annum; not a large amount to

boast over, unless it were all excellent, which we suppose no one will assert. As we learn more distinctly of the dimensions of objects by comparison, we may say that this MONTHLY has never contained *less* than 720 pages a year, each containing nearly, if not quite, as much matter as a page of the Transactions; while it has frequently contained almost, if not quite, 1,000 pages a year. Surely, as to the amount of matter, the association is not doing *very* wonderful things. As to the quality of the articles, time would fail to say all that might be said about that; but we may add, that "fair to middling" is as high praise as the average will bear.

Occasionally the worthy president was carried away by his enthusiasm beyond the solid ground of facts. Thus, he asserts that "the communications on deformities after fractures constitute the basis of *the best monograph ever issued from the press.*" Very sweeping that! Wonder if Dr. Eve has read *all* the monographs ever issued from the press? If not, it would have been worth his while to have said *one* of the best, and that would have been sufficient praise even for Dr. Hamilton.

But hear our worthy president's peroration: "Gentlemen of the American Medical Association, we have convened for important purposes; great events are before us; the interests of humanity are here; the hopes of the profession are in this meeting; the eyes of the world are upon us. May we then so act, in view of surrounding circumstances, that the 'skill of the physician shall lift up his head, and in the sight of great men he shall be in admiration.'"

The quotation is very appropriate when we consider that the meeting was held at Washington; but we do not quite believe that about the hopes of the profession. If so, we should say as Col. L. did to the niggard of whom he solicited a donation to place the statue of Washington in Union Square, and was met with the assertion that Washington was enshrined in his heart: "Sir, if that is the case, Washington is in a mighty tight place."

There is no disputing about tastes; therefore, we may be permitted to regret that the president should have poured out such fulsome panegyrics upon the body of which he was the chief officer.

The "Report on the Medical Topography and the Epidemic Diseases of Kentucky" is by W. L. Sutton, M D., and is rather to be taken in connection with the reports on the same subject, and by the same author, in vols. V., VI. and VII., than by itself. The geological topography of the State, and its effects on diseases, are discussed, and illustrated by a map; while, to show still more clearly the character of

the people, the writer gives a summary account of the settlement of the State. Here the reader finds himself very unexpectedly engaged with the stories of Indian warfare, which he is not accustomed to meet with in medical books; and he is scarce recovered from his surprise when he is again astonished by a *quasi* defence of the slaveholders of Kentucky. Albeit we quite agree with the writer as to the condition of the slaves in his State, and for our own part have no objection to anything that he has said, our judgment is that it would have been better to omit this part of his report, especially all reference to Mason and Dixon's line. Let us keep political *thoughts* out of our professional publications. Quite an interesting account of the mineral waters of the State follows, and this will, with the accompanying analyses, be of great use in the State, and in its vicinity.

The Jerks, a curious and instructive nervous disorder, the effect of the excitement of certain meetings for religious purposes, is next described at length. Nothing new is suggested concerning it, but it is perhaps well enough to embalm the subject for preservation in this sarcophagus.

The remainder of the report, except a few tables, is taken up by a discussion of different theories as to the cause of "milk sickness," that curious disease of cattle and of man. Dr. Sutton does not attempt to decide *ex cathedra* as to its cause, but gives his reasons for ascribing it to malaria. It is a disease which should be very carefully studied by all who are called upon to treat it, and in the obscurity which hangs over it, every fact, though it may seem unimportant, should be carefully recorded.

The "History of the Topography and Epidemic Diseases of New Jersey, and the Treatment thereof," is by Dr. L. A. Smith, of Newark. It commences with the not unfrequent complaint of lack of assistance from professional brethren, to whom circulars had been sent and requests made for assistance. It contains a very good account of the topography of the State, and short sketches of the epidemics which have been noticed by the writer and other authors during the last three years; these are the exanthemata, dysentery, erysipelas, whooping-cough, and intermittent, remittent and typhoid fevers. New Jersey ought to have done a good deal more, but she might have done a good deal less.

The "Report of the Committee on the Epidemics of Ohio," by Dr. Geo. Mendenhall, is very short, and repeats the complaint of the New Jersey reporter concerning the impossibility of obtaining any information from the profession. Three pages of this volume contain

the result of the committee's labors since 1855, when it was appointed; and if we assume, as we certainly shall, that the committee has been industrious, we have a striking evidence of the truth of the statement of the reporter, "that the past three years has been a period of unusual health." The report closes by recommending to the association the adoption of the following:—"*Resolved*, That a committee of six be appointed, the chairman of which shall reside in the District of Columbia, to memorialize Congress, and urge the passage of a law by which a uniform system of registration may be adopted by all the States for the purpose of obtaining correct reports on vital statistics, by those whose duty it may be to take the census of 1860." We do not find that any action has been taken on this important and *practicable* matter. It should be pushed by Dr. M. at the next session of the association.

The report on Medical Literature is by Dr. A. B. Palmer, of Detroit, and of course attracts our attention, because this committee is accustomed to give the medical journals a talking to for their shortcomings and misdoings, as well as for their right doings, for we will do their reports the justice to say that they almost always have some pleasant words for those poor drudges, the editors; not that we can say that the journals have been particularly benefited by the association. Power to influence does not come in that direction; and in fact the thirty journals of the country have more power with the profession, and constitute a more effective instrumentality, than all the associations put together. In truth, the association would be blown to atoms if these publications should happen to begin together to oppose it, or even to hold from it the support which they now give. It might be well for reporters to remember this before they attempt to pat us on the back with a patronizing air. Gentlemen, we are independent of you, but you are not of us; therefore it becomes you to treat us with civility at least, which has not always been the case. This report is free from these faults to a remarkable degree, and is marked for the most part by sound common sense. It will, we trust, be useful to the profession at large, for it contains some wholesome truths of value to them. The reporter is, however, wrong in the estimate which he places upon the reviews of books. They are well enough in their way, but they are not what the profession desire, they are not particularly useful to them as a general thing, and but few will carefully read them; an analysis of a book is sometimes needed, but the greatest benefit to the profession is from a careful estimate of the value of the book to the physician in his daily duties. We say this more

freely because the MONTHLY has at one time and another given a good deal of space for reviews, carefully prepared by those who were every way competent in the departments under which the various books might be ranked. If in the style of some of the English reviews the title of the book be made the text of an essay upon the subject of which it treats, well and good, but the same thing could have been as well done without the text, and, in some respects, better done. If it is intended to combat the author's notions, this makes the review an argument against the author's doctrines, which may be occasionally useful to the profession at large, but as a general thing has no extended interest. If the book contains only a grain or two of wheat, it can be sifted out and presented to the readers of journals in a "book notice" of two or three pages. There is in the same space room enough to blame the author for his sins, whatever they may be thought to be, whether against language, or against science, or against truth.

As if with the intention of computing his own arguments for reviews, the reporter proceeds to give 'notices' of a number of books; and although they have not in them the phrases to which he objects as being stereotyped for use, (and which are not so common as he supposes,) they read just like 'notices' from medical journals. Take, for instance, the notice of Miller's Obstetrics as an illustration, and the resemblance must strike every one. At once it gives a terse, pointed, exact description of what the work is, from which any man could judge, whether or not he cared to purchase it for his own library; and is not this as well as to have made it the excuse for an elaborate discussion of some vexed point in obstetrics, or for wandering off into the obscurities of embryology? There can be but one answer to this, and that affirmative. From all this it is clear that, in our opinion, the absence of *reviews* in our journals is not in consequence of a deficiency of funds in the hands of editors to enable them to pay reviewers, as the author of this report asserts, but because reviewers are not much wanted. We mean such reviews as the author of this report evidently has in mind. Occasionally they are well enough, but to give reviews of every work that comes to us from the publishers would be absurd, excluding, as they must necessarily, matter which is worth vastly more to the man occupied by his professional labors. There are several other topics discussed in this report upon which we should like to dwell, but cannot. The report is well worth reading, though we cannot but regret that the author allowed the "American Eagle" style of writing to soar with him to

such heights as he reaches in that long sentence on p. 219. His perils are fearful.

In justice to the committee, we append a brief summing up of the leading positions of the report:

"The periodical literature of the United States is regarded as possessing great abundance, variety, richness, and general excellence; and though still possessing defects, is constantly improving. Many of the contributions are of great weight and value, indicating an enterprising and industrious profession. Serious defects are regarded as existing in the review department, arising mainly from the fact that the increase of the journals will not justify pecuniary disbursements for literary labor; and editors, necessarily engaged in other pursuits, cannot command the time, if all possessed the ability to do the work thoroughly and well. A few well-supported journals in place of the many but illy (*ill* is the proper word) sustained, might tend to correct this evil; but the multiplicity of local journals is considered as peculiarly beneficial, by collecting from a greater variety of sources a larger number of facts, and developing the powers of a larger number of writers.

"The number of original American medical works is increasing, and their character is improving, and in some respects, particularly in practical utility, they will not suffer in comparison with those of Europe; yet serious imperfections exist, and decided improvements are demanded. Great and permanent improvements in medical, as in general literature, must be gradual, depending more upon the advancement of education, of taste and intelligence, than upon any specific measures which may be adopted. Still, various particular measures, such as the frequent writing of medical theses during professional pupilage, and keeping systematic records of cases when in practice, would do very much in hastening improvement. But for the greatest perfection of our literature we must wait the fuller development of our country, and for those changes of time and circumstances which shall produce a larger number of devoted savans and scholars, placing them in situations where a variety of absorbing pursuits shall not prevent the concentration of great talents upon a comparatively limited range of subjects.

"Respecting the reprint of foreign works, it is held, that while the free circulation of the best class of these works among us increases the knowledge and improves the taste of the masses of the profession, it does not interfere with the production of the higher order of original works; and that the moral obligation of our government to join with

Great Britain in the enactment of an international copyright law, is by no means clearly established."

The "Report of the Special Committee on Medical Education" is by Dr. J. R. Wood, of New York; and while it is full of sound observations, and is straightforward and sensible, it is not practical in its suggestions, and will not accomplish anything. The recommendations of the committee are referred to a convention of delegates from the various medical colleges, which is called at Louisville on the Monday next preceding the day on which the association meets, that is, on the second day of May next. When that convention has met, *and done anything*, we will let our readers know.

Dr. J. Foster Jenkins, of Yonkers, N. Y., is the writer of the next report, of which the subject is "Spontaneous Umbilical Hæmorrhage of the Newly-born." From the rarity of this accident comparatively few have seen a case of it; while, for the same reason, it happens that little is known of the causes which induce it. Hence the greater value of this attempt to elucidate it. This is probably the best and most complete paper as yet published upon the subject, and, although we cannot give the association any particular credit for having drawn out the paper, for it would no doubt have been written and published if the association had never been heard of, we can congratulate that body on having the opportunity of presenting so valuable a paper in its transactions.

The author describes two forms of umbilical hæmorrhage. In the one which is most common, "a fungoid excrescence springs up from the bottom or edge of the navel, after the falling of the cord, while cicatrization is yet incomplete. From its granulated surface moderate bleeding occurs at intervals." The other form commences "occasionally, a few hours after birth, by exudation of pale blood from the walls, and at the insertion of the funis; but it more frequently succeeds, sometimes by many days, to the falling of the cord. Jaundice and purpuric eruption, from their frequent association with it, may perhaps be regarded as warning signs of its coming. Other than these it has none. A serous or sanious oozing from the apparently healed surface of the umbilicus deepens gradually into a continuous percolating hæmorrhage."

The first form is usually treated with success by the application of a pencil of nitrate of silver, or a ligature; the second form is almost uniformly fatal, in spite of the use of the most active measures to stop it.

Dr. Jenkins has brought together, from different sources, 178 cases

in all, of which 76 have not been before published, having been communicated directly to him by the gentlemen in whose practice they occurred; one was in his own practice.

The remedies which in the severer form of hæmorrhage receive the most praise from the author, and are chiefly to be relied upon in his opinion, are externally the ligature *en masse* as recommended by Mr. Paul Dubois, (that is, transfixing the base of the tumor with two hair-lip pins and applying the figure 8 ligature over them,) and internally the mineral acids, the muriated tincture of iron, the sulphate of quinine, anodynes to allay muscular action, nourishing food and stimulants.

The next report is on the influence of marriages of consanguinity upon offspring, by S. M. Bemiss, M.D., of Louisville, Ky., but this must be reserved for a subsequent number of the MONTHLY. P.

Report on the Nervous System in Febrile Diseases, and the Classification of Fevers by the Nervous System. By HENRY FRASER CAMPBELL, A.M., M.D., Professor of Anatomy in the Medical College of Georgia. Philadelphia: Collins, Printer, pp. 172, octavo, 1858. Received from the author.

About a year ago, we called attention to a volume similar in size to the one before us, and from the same pen. (See AMERICAN MEDICAL MONTHLY for April, 1858.) The volume before us is a continuation of one of the papers in the volume referred to, and constitutes Dr. Campbell's Report to the American Medical Association for 1858; from the published Transactions of which Association it is extracted.

In the development of all the varied phenomena of life, whether in states of health or disease, the nervous system has long been recognized as deeply implicated. In the abnormal phenomena, manifested in the various forms of febrile diseases, this implication has been variously observed; but, so far as we know, Dr. Campbell is the first writer who has attempted an extended classification of febrile diseases, upon this nervous relation.

Humoralism and solidism have each had their advocates, and each system, in its explication of morbid manifestations, has presented more or less of truth, which truth cannot be excluded, but must form an essential part of any *neuropathic*, or any other theory of fevers.

In regard to neuropathy, and the design in the paper before us, the author says, "What has been regarded as only a part of the woof, we wish to show is the very warp upon which all the phenomena of

fevers are fabricated. In a word—we wish to make the relation which the *nervous system* sustains to febrile diseases the basis upon which all other phenomena, however diverse and antagonistic, are to be classified and systematically arranged."

Dr. Campbell, at the outset, gives expression to three propositions, about which cluster nearly all that he has to say in the essay before us.

Prop. I. "As all the normal phenomena of the living organism are known to occur under the superintending influence of the nervous system, and are dominated by it, so it is but rational to regard all morbid actions as being more or less influenced in their manifestations by aberrated nervous action. In that class of diseases ordinarily designated fevers, our researches and observations have led us to the confident belief that the above law applies with sufficient prominence to constitute the basis of their classification, and we would respectfully claim for it, that it is the only reliable basis of their classification; and further, that in its more extended application, it will hereafter be found to constitute what may be called, *par excellence*, THE LAW OF FEBRILE DISEASES."

Prop. II. "As in the nervous system we recognize two grand departments, viz.: 1st, The cerebro-spinal system, all the normal actions of which are subject to cessation and interruption; and, 2nd, The ganglionic system, all the normal actions of which are of a *continuous and uninterrupted* character, so in the manifestation of febrile diseases do we distinctly recognize two grand distinguishing characteristics, respectively typifying the normal actions of these two systems of nerves. Thus, a character of *paroxysm* obtains in certain cases, while a character of *continuousness* as plainly marks the others."

Prop. III. "As in the cerebro-spinal system we find that its normal action pertains almost exclusively to sensation and to motion, with only a secondary and comparatively remote influence (which we have termed excito-secretory) upon nutrition and secretion, while in the normal action of the *ganglionic system* the entire function is known to be to preside over nutrition and the secretions, so in *paroxysmal fevers* do we find intense pain, modified sensation, and symptoms allying them to neuralgic and convulsive diseases very prominent; while in *continued fevers*, modified nutrition and secretion are the marked and most prominent characteristics."

Upon the discussion of these propositions Dr. Campbell enters, by first giving a brief sketch of the two nervous systems and their distinctive methods of action. That the cerebro-spinal nervous system

controls all æsthetic, intellectual, and senso-motory phenomena, and that the ganglionic governs circulation, secretion, and nutrition, are admitted facts. The morbid development of these phenomena must be consequent upon a coexistent morbid condition in one of these two important nervous systems. But to classify fevers into two main divisions, *cerebro-spinal* and *ganglionic*, seems to us to base the classification wholly upon the *accompanying phenomena*, without reference to the varying *causative* elements, or the morbid pathological *consequences*.

All external and internal conditions that affect the integrity of the system more or less influence the nervous system; but they do not influence that system alone; the fluids and solids of the body are all, as well as the nervous system, influenced by those causative agents which develop the morbid phenomena which we call disease. The atmosphere, in its thermal, luminous, electric, hygrometric and toxic conditions, affects the integrity and the phenomenal manifestations of the organism; and the *blood*, as affected by functional disturbances, and extraneous circumstances, not only affects the nervous system, but the healthy integrity of all the other solids of the body. "Like water absorbed into a sponge, it comes in contact with every organ, bathes and irrigates the intimate structure of every tissue, and is the source from which the cell-membrane of our ultimate component parts absorbs directly its material, either for metamorphosis into its own fabric, or for the elaboration of the secretions."

It is to be hoped that the time may come when the *causatives* of disease may form the basis of classification. It is true that time has not yet come, and until which time we are not certain anything would be lost in basing our classifications upon the pathological conditions—the immediate and essential causatives of morbid phenomenal development. Dr. Campbell says, "We here distinctly reiterate it, *we have nothing to do with the nature of the causes;* in the present discussion our search is after the *laws of phenomena;* the nature of the remote causes of these phenomena is entirely and confessedly beyond our reach and comprehension."

Dr. Campbell next enters into an examination of paroxysmal fevers, and enumerates their complex and intervolved phenomena. In the course of these remarks he says, "Whatever jumble the phenomena of fevers may present, *each phenomenon must necessarily refer to one or the other of these two systems of nerves.* It *must be* either that of a sensory, a motory, a senso-motory, an æsthetic, or an intellectual aberration of the *cerebro-spinal* system on the one hand, or one of circulatory,

secretory, nutriental, vaso-motory aberration on the other, of the *ganglionic* system." P. 36.

In his discussions upon this subject, Dr. Campbell finds that the symptoms of *cerebro-spinal fevers* ally them to neuralgic and convulsive diseases, and also to many of the local inflammatory affections. Somewhat in confirmation of this, it may be urged that several observers have noticed the frequent passage of intermittent fever into epilepsy, and it is well known that neuralgic affections are much more frequent in those regions where paroxysmal fevers prevail. Pneumonia, dysentery, &c., are more or less paroxysmal, and consequently the accompanying symptoms in these diseases are said to be "for the most part an *excito-motory phenomenon.*"

The question now arises why do the changes in organs, under the sway of the ganglionic system, come to observe *periodicity*, when this periodicity has been fully shown to be adverse to the *method* of that system? Dr. Campbell answers, "*Because these organs are a system of bodies acted upon by forces which are periodical, and the condition of the bodies are therefore necessarily periodical, like the forces which act upon them.*" "Recognizing this as the law of periodical excito-secretory action, necessarily constitutes it as conspicuously, THE LAW OF PAROXYSMAL FEVERS; for paroxysmal fever, in its intrinsic and elemental nature, is, in all its varieties, essentially nothing more nor less than a vast representation of a widely extended and universal periodical excito-secretory action throughout the organism."

The various secretions are subject to paroxysmal exacerbation in cerebro-spinal fevers, "*because, under these circumstances, the system of bodies or organs from which they are eliminated, are being acted upon by forces which are periodical, like the forces acting to produce them.*" The paroxysmal manifestations of excitement in the heart's action, and the variations of temperature of the surface of the body, are also explainable by the same general law.

Yellow fever and dengue fever are ranked as cerebro-spinal fevers, while typhus, typhoid and the exanthematous fevers are considered as ganglionic. The ganglionic fevers are not fully considered in the paper before us, but will be resumed in the author's next report.

In a brief notice, it is impossible to give a correct idea of the contents of a volume which is, in its nature, compendious. We have not the space at our disposal for a more extended notice of this volume, which we have read with interest, but we trust sufficient has been said to convince our readers that the work will repay the perusal for

themselves. We would gladly give Dr. Campbell's tabular arrangement of disease, but want of space will not admit.

The typographical appearance of the volume is excellent, but the book would have made a better show in the library had it other than a paper cover. O. C. G.

The Science and Art of Surgery; being a Treatise on Surgical Injuries, Diseases, and Operations. By JOHN ERICHSEN, Professor of Surgery and of Clinical Surgery in University College, &c. An improved American Edition, from the second enlarged and carefully revised London Edition. Illustrated by four hundred and seventy Engravings on wood. Philadelphia: Blanchard and Lea, 1859, pp. 996.

This book has been too long before the profession to require at this time an extended notice. This edition is announced as an improvement on its predecessor, and such we believe it to be. Some things still remain in it which will hereafter require further amendments, but perfection we do not expect to find in any professional work. Were a young practitioner of limited means to ask us what work in surgery he should purchase, being compelled to limit himself to one, we should advise him, on the whole, to take this edition of Erichsen's work. It is, in the main, correct and practical; well illustrated, sufficiently clear in its style, and as comprehensive as it is possible to be, without becoming so meagre as to be useless. P.

EDITORIAL AND MISCELLANEOUS.

—Medical education, a topic ever interesting, but at this time exciting more than usual debate in the profession, may not unworthily occupy a share of our editorial pages. The immediate occasion of the present excitement is the approaching time for the proposed meeting of professors in medical schools, at Louisville, Ky., from which some appear to expect a great deal, from which we expect nothing. Why our expectations are so moderate will, we trust, presently appear.

Still, the approach of the time appointed for this meeting, or for any other meeting, would not so much agitate the profession, were there not lying in and behind its usual calm surface a conviction that

it is time that something should be done to improve medical education in this country. In the words of those who talk most about such matters, it is time that "the standard of medical education was elevated," and every discussion turns upon the point "how to elevate that standard." Taking for our text the recommendations of the last report on this subject, made to the American Medical Association, we shall give some of our thoughts upon the general subject.

The recommendations of that committee are in brief: *First*, schools should be encouraged, and those who have no leisure or facilities for instructing pupils should not receive them into their offices; *second*, every school should have at least seven professors; *third*, all the schools in the country should commence their sessions in October, should have but one term annually, and that should be six months long, and only four lectures being delivered each day; and *fourth*, a liberal education and hospital attendance should be an imperative preliminary to admission to examination for graduation. An appendage to the report suggests that it be submitted to a meeting of the medical teachers represented by delegates from each school, who should report their opinion concerning it to the association. This is our text.

The parties who are interested in medical education are three in number, and all of them have more or less influence in saying what the degree of education required for admission to the practice of the profession shall be. These parties are, *first*, the medical profession at large; *second*, the teachers, who, through the corporations with whom they are more or less directly connected, hold the right to confer degrees; *third*, the public at large. To these there ought, perhaps, to be added a fourth, namely, the medical staff of the hospitals. This fourth power is, however, only just beginning to claim its proper influence, or, rather, is only just beginning to exercise it; and though it contains in itself the elements of great importance to the profession, we shall for the present omit reference to it.

In order, then, to improve medical education, in the cant phrase of the day, "to elevate the standard," requires not only the consent, but the co-operation of all three of these first-mentioned parties. The profession at large must consent and must aid in the undertaking, for to them, in their individual and private character, do the pupils go for advice and direction as to their fitness to enter upon the study of medicine, as to the course of their studies, as to the best time and the best place for graduating, and in general, for that direction and guidance which the neophyte in any science seeks and usually adopts. It is also no inconsiderable item contributing to their influence, that

students do, in the majority of cases, pass the greatest portion of their time in pursuing their studies in the offices of practitioners. In their power, therefore, it lies to impress upon their pupils the necessity of careful and thorough preparation for the responsible duties of the profession, or to allow them to go on heedless and careless of their studies, anxious only that their time of pupilage should be passed. The *great* power for good or for evil is, then, in the hands of the profession at large, whom some of the writers upon this subject insist upon calling, with entire absurdity, the *lay* profession.

The teachers who directly or indirectly hold the power to confer degrees, that is, the professors in medical colleges, must aid in any such attempt to improve medical education, because most of the degrees conferred upon students do come from these sources. In this State, the same power to confer degrees is possessed by each County Society and by the State Society, but it is still true that but few degrees are so bestowed. The professors do, in fact, have the control of the gate through which students enter the profession, not because they are particularly entitled to it, but because the rest of the profession have allowed them to assume it. They have then a certain power, and so long as they use it to admit unqualified persons, it is in vain for the rest of the profession to expect to put a stop to this evil.

But the public at large must assist in the undertaking, for, with our democratic institutions, it rests with the people to permit one or another party to confer the degree of doctor of medicine, and it rests with them to discriminate between the learned and the ignorant practitioner, encouraging the one or the other by their patronage and support. The difficulty arising from the too easy consent given by the public through their representatives to all who ask for authority to confer degrees, is increased by the entire independence which exists between the different States in this respect. It would be comparatively easy for the profession to inform the people of any one State upon the necessity of exercising great care in the bestowal of this authority, but it becomes impossible to convince every man, in more than thirty different States, who may be elected a representative, and has a certain authority committed to him, to confer this power.

Now, were all three of these different parties to unite to "elevate the standard," the said 'standard' would go up very rapidly, but no two can accomplish the task. For, suppose the profession at large hold back, the professors and the public cannot accomplish anything. In fact, the public would probably side with the profession, and the professors by themselves are powerless. Again, if the professors hold

back from any reforms, nothing can be done while they hold open the gates, and admit to the highest degree of the profession men who are unfit for it. Moreover, the profession and the professors can do nothing while the people are ready to permit almost any collection of men calling themselves "doctors', to confer the degree of "Doctor of Medicine" upon students.

Can any one be so foolish as to suppose that it is possible that all three of these parties should consent to unite in any measures tending to improve medical education? The indifference of the profession, as a body, to do more than *talk* about any measures of improvement, is notorious; the indifference of the professors to do anything which shall tend to lessen their fees is everywhere apparent; while a reference to the statute-book of any State will convince the most incredulous that the whole tendency of legislation, as far as it affects medical matters, is to make easier and easier the admission to the profession, and to remove all legal distinctions between the most learned physician and the most ignorant pretender; each and all of them give a negative to any such suggestion.

Were the government of our country, instead of being a democratic or representative one, consolidated into a single empire, under the rule of one person, or were there any authority in the American Medical Association to govern or to direct medical education, then, indeed, we might hope to accomplish something. But the association has no power. It has recommended and recommended, and all to no effect. If some school has acted in accordance with some recommendation, as to lengthen its term, it has soon been glad to abandon it, and to go back in the old way. The professors are greedy to get the fee for graduation, and allow many a one to slip through the green-room in safety; blinded, doubtless, by the glare of the gold in the ignoramus's hand. Nay, we have in our possession proof that a degree will be conferred by some of these gentlemen upon parties whom they have never seen, and who of course cannot have been under their instruction, provided a sufficient payment, and that not a very large one, is made. We say we have proof, because we have a letter from the executive officer of an institution to an under-graduate, offering to do this very thing, but we ought to add that it is *not* from a school in this city. The professors are, in fact, rivals of each other, and resort to most shameful proceedings to secure students to their own schools, that is, to bring money to their own pockets. It is no grateful task to expose these short-comings and misdoings, and we certainly shall not volunteer to do it; only alluding to these things, because so many

honest members of the profession seem to expect that the millennial days of medicine will not come till the professors have studied out some plan for action, which the said professors have a constant interest in not doing.

It needs no extended comment to show why we expect nothing from the proposed meeting of professors at Louisville. If a sufficient number come together to make a respectable meeting, (which we very much doubt,) their interests will be so entirely different that they can agree on nothing. If a majority are in favor of long terms, and only one session a year, there will be the Maine, the Massachusetts, the New Hampshire, the Vermont, the Connecticut, and the Albany schools, at least, which will oppose such measures, and will not be bound by any vote of any meeting. If it is proposed to make a liberal education a necessary preliminary to graduation, nobody will go for it; or rather, nobody will support it with the expectation that it will be carried out. Some may endeavor to make capital for themselves by urging it, knowing that the majority will not let it pass. If hospital attendance is made a necessary prerequisite to graduation, the city schools will probably go for it; the country schools may not oppose it, but will go on confirming degrees just as they always have done.

We put the question fairly and squarely, Is not this the common-sense view of this whole matter? Can any point of our statement be truthfully controverted? If not, and we believe it cannot, why should so much time and so much space be occupied in discussing these points, which are of no possible value practically?

But let us not be understood to say, that we despair of seeing the science of medicine make rapid progress in our country. Though much remains to be done, much is already doing to put the medical science of America on a level with that of Europe, and to make it apparent that it is so placed. All that is doing comes not from the resolutions of associations, nor from the meetings of professors, but from the good sense and diligent exertions of the individuals of the profession. And all that remains to be done must be accomplished in the same way. Doubtless the suggestion of Dr. Brinsmade, in his late inaugural address to the Medical Society of this State, viz., that a new degree should be conferred upon members of the profession after certain advances have been made in professional knowledge, contains in it the elements of a movement which, if carried out, will excite to still greater exertions to advance our science. But this power to bestow additional honors must not be extended to the schools. The

medical societies are the proper sources of it; not each petty one that results from the agglomeration of two or three practitioners, but those which are established by law for a whole State. Emulation, whether it be by *concours* or by written essays, or some other method, will probably be the basis of it, while inflexible impartiality and stern judgment will be necessary in those to whom the trust may be temporarily confided.

In brief, then, we may add, in recapitulation, that we despair of seeing the union of the three interested parties by whom the early education of medical students can be made more thorough. The people are indifferent, the professors have all their pecuniary interests in opposition to change. It is only by making the labors of the working men of the profession more fruitful of honors and of honorable emulation that the tyros can be induced to prepare themselves more carefully for their duties.

— During the first ten days of March the Medical Colleges throughout the country were busy in replenishing the ranks of the profession with new recruits, to supply the places of those who have gone from among us forever, and to fill the vacancies made by those who have been called into other paths of duty. The Colleges of this city at this time closed their winter sessions, and their graduates are now scattered over the whole country.

The *New York Medical College* was the first to hold its Commencement, which took place Tuesday, March 1st. Its class during the winter numbered 107; its graduating class 25. The *Van Arcken* prizes for the best two theses presented, were awarded to Edward S. Dunster and Hugo Stangerwald. The subject of the first was "Delirium Tremens;" that of second, "The Pathology of the Heart."

The address, usual on such occasions, was given by the Hon. James T. Brady. It was an entertaining and happy address, full of pungent hits and sharp sayings, dealing fairly with the faults of the profession, and extolling sensibly its merits. It condemned the course of the public press, which in one page reads homilies to physicians, while another is filled with recommendations of all sorts of quackeries. The false conservatism which deals unfairly with new ideas was reprobated. One remark is worthy of careful consideration. In terms of severe censure, Mr. Brady spoke of "a *secret society* —a dark fraternity, which he said he had been informed was in existence in this city, the object of which was to confine medical patronage to its members, so as to exclude from all chance of success every young and aspiring member of the profession who relied on his talents

to advance his social and professional career." The importance of Medical Jurisprudence was dwelt upon, and a case in illustration from Mr. Brady's own professional experience was cited.

The Commencement at the University of New York was held March 4. Its class during the past winter reached 350; its graduating class numbered 128. The *Mott Medals* for the best anatomical preparations were awarded as follows: Gold Medal, to George K. Smith, N. Y.; Silver Medal, Luis Fernandez, N. Y.; Bronze Medal, B. W. Sparks, Ga. The Metcalfe Prizes, for the best medical clinic, were also awarded. A beautiful Microscope, to Peter Bryce, of S. C.; A complete set of Instruments for post-mortem examinations, to R. F. Hawthorne, Ala.

The class was addressed by Dr. John W. Draper, the President of the Faculty.

At Bellevue Hospital, the ceremony of awarding the prizes offered by Drs. Wood and Elliot to the students of all the Colleges, took place March 2, in the amphitheatre of that institution. Dr. Wood's first prize of $50, was given by the Judges, comprised of three Professors from each of the Colleges, to Dr. Socarraz, of Cuba, a graduate of the N. Y. University, and Dr. Wood's second prize of $25, to Dr. J. D. Brumley, a graduate of the N. Y. Medical College. Dr. Elliot's prize of $50, was awarded to Dr. E. A. Hervey, of the University Medical College.

The College of Physicians and Surgeons held their Commencement March 10. There were 58 graduates; the class numbering 180. The valedictory address was delivered by one of the graduating class, Dr. R. O. Mason. Prof. Smith announced the names of the authors of the two best theses which had been handed in, as competitors for the offered prizes. The first prize of $50, was awarded to Robert F. Weir, of N. Y.; the second of $25, to Geo. W. McCune, of Ind. Dr. Alex. H. Stevens addressed the Alumni of the College.

— At the first regular meeting of the Academy in March, Dr. Hinton read a report from the Section on Surgery and Surgical Pathology; Dr. S. C. Foster read a report from the Committee on Sanitary Affairs, which, by vote of the Academy, was signed by the President and Secretary, and ordered to be sent to the Legislature. Dr. S. R. Percy then read a report from the Committee appointed by the Academy to investigate the subject of City Milk, in accordance with a suggestion received from His Honor the Mayor of the City. Dr. Percy also read a report made to the Committee by himself, from which the committee reported to the Academy. A full abstract of Dr. Percy's paper will be found in another part of this

number of the MONTHLY. Dr. Francis was highly pleased with Dr. Percy's paper, and characterized it as one of the ablest papers which had been presented before the Academy. The great labor bestowed upon it, and the important results to which the reporter had arrived, demanded that it should be made known to all parts of the country.

Dr. Gardner was gratified with the conclusions of the paper, verifying as it did, the results of a similar investigation made by a committee of the Academy ten years ago. He regretted that no post-mortem examination of the cows had been made. In the previous report, referred to, several examinations of the bodies of the animals had been made. He thought that a study of the teeth might furnish some important facts; that the acid condition of the food taken would perhaps account for the early destruction of the teeth.

Dr. Dalton thought that further investigations should be made, to ascertain the cause of the changes in the chemical reaction of the milk in swill-fed cows.

At the stated meeting March 16, Dr. J. C. Dalton read a paper "On the Rapidity and Extent of the Physical and Chemical Changes in the Interior of the Body," and Dr. J. P. Batchelder finished his paper on "Compressed Sponge," commenced at a previous meeting in February.

— As the decennial period for the revision of our Pharmacopœia is approaching, it becomes the duty of the medical profession to direct its attention towards the selection of proper delegates, to represent them in the convention to be assembled in Washington for this purpose. As this convention determines what shall be *officinal* preparations, and gives the rules for their preparation, it is of the greatest importance that men with a thorough knowledge of chemistry and pharmacy should form the delegates sent to its sessions. Nothing can be more important than a perfect uniformity in the composition and strength of *shop preparations*. This is necessary for the protection of the physician and the apothecary, as well as the patient. We cannot secure such uniformity *by law*, in our country of restless desire for novelty and change, and hence the necessity of endeavoring to effect it by general agreement on the part of physicians and pharmaceutists. The effect of such a convention, as that proposed in 1860, will be more salutary than any of its predecessors, as the profession is becoming alive to the rapid advances, of science and more disposed to make them available.

Not only is there required a revision of formulæ, but also of nomenclature, so that some of the exploded chemical terms, now employed, may be driven from the shop, and no more be seen on our prescrip-

tions. If there are no such chemical compounds as *muriates* of the inorganic elements, why retain the name, thus stultifying ourselves by retaining the traces of an ancient error? We trust that medical societies will appoint delegates at an early date, so that the latter can consult on the necessary changes in the Pharmacopœia before the time for the assembling of the convention.

— Dr. Thomas D. Mütter, late Professor of Surgery in the Jefferson Medical College, of Philadelphia, died at Charleston, S. C., on the 16th day of March, aged 60 years. It is a loss to the profession not easily made good. In our student days we listened to him with great delight and profit, and our admiration of him was profound and sincere. He has long suffered from ill health, which has for some time interfered with the practice of his profession, but the announcement of his death was to us unexpected. Though our personal acquaintance with him was limited, we feel that we have lost a real friend, while our profession has lost a most brilliant ornament.

NEW YORK. *February* 20, 1859,
791 Broadway.

EDS. AM. MED. MONTHLY—Your note is just received. I have to regret that I shall not be able to give you, in time for publication in the April number of the MONTHLY, the paper on my views of the chief causes of Pulmonary Consumption, with my recent investigations into the process for its arrest or cure.

As stated to you in conversation, I not only propose to enter into the discussion of the disturbances of the digestive and assimilative functions, by which a tendency is generated for the production of tuberculous disorders, or through which an individual, from hereditary transmission, may be rendered more prone to their access; but I will enter into the detail of my present views, of affording to the lung-structure itself, by means of inhalation and superficial absorption, such nutrient elements as normally constitute the blood of the tissues, by which a return to soundness may be induced, these elements already being deficient or depraved. I shall also endeavor to show that the vital capacity of the depressed general system may be so increased through remedial application to the bronchial and exterior surfaces, that the reproductive changes, so highly essential to the re-establishment of health, may ensue; whilst the proclivity towards pulmonary consumption, in those yet comparatively unaffected, may be retarded or eradicated.

In one of the numbers of the MONTHLY, early following, I hope to have time to publish these views more *in extenso*, wishing that they may serve to attract the attention of the profession to renewed experiment in the direction now opened, and that of the public to a greater observance of those sanitary measures so practically important to its healthy condition.

I have the honor to remain yours, very obediently,

H. P. DE WEES.